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Pantheon Paradigm*

CARROLL L. V. MEEKS Yale University

'The Pantheon, built by the son-in-law of Augustus, was the first great monument of non-useful architecture.' —Stendhal

For many Neo-classicists the Roman Pantheon was the most admirable building of antiquity, yet they never sought to copy it (figs. 1 and 2).

'Pantheons' sprang up in many places and for many purposes; but none of them can really be mistaken for the original. It is merely a careless habit of architectural historians to toss off phrases like, 'innumerable copies of the Pantheon were erected all over Europe and America in this period'; and, '... many Pantheon imitations about 1800 ...'. The use of 'copy' and 'imitation' in such observations is perhaps owing to hasty observation and partial comprehension of the aims and spirit of the architects of Neo-classicism. Wittkower implies this in his comment concerning the relationships between Bernini's church at Ariccia and the Pantheon that modern critics 'fail to understand the subjective and particular quality with which seemingly objective and timeless classical forms have been endowed'; or as Stendhal says, 'a phrase without novelty may express or give birth to a sentiment'. Wittkower notes that both Palladio and Bernini had interpreted the original Pantheon as the union of two basic forms, the vaulted cylinder and the portico, and that in Bernini's case, these were given an 'entirely non-classical meaning'. This is emphasized by the fact that in addition to the two basic elements which Bernini had employed, there were in his day two more which he left out. These were the great attic against which the portico butts, and

some minor towers. The towers had been there in the sixteenth century. They were mediaeval and quite small. In the 1660s, Bernini himself regularized them into a pair of larger domed belfries, which became known as the 'ass's ears'. They were removed in 1883 or 1893. The rebuilding



Fig. 1. Exterior, Pantheon, Rome, A.D. 120-125 (photo: Alinari).



Fig. 2. Interior, Pantheon, Rome, A.D. 120-125 (photo: Alinari).

* The facts and some of the concepts which are used in this paper were drawn primarily from the following: Nello Tarchiani, *L'Architettura Italiana dell'Ottocento* (Firenze, 1937). It is the first general survey of the period, and is short and sound. Emilio Lavagnino, *L'Arte Moderna*, 2 vols. (Torino, 1956), with interesting analyses and abundant illustration. The indispensable *Guida d'Italia*, 23 vols. (published by the Touring Club Italiano, Milan), frequently revised and re-issued. Two other helpful books are: Angela Ottino Della Chiesa, *L'Eta Neoclassica in Lombardia* (Como, 1959), an excellent exhibition catalogue; Mario Praz, *Gusto Neoclassico* (Naples, 1959), enlarged edition.



Fig. 3. Chapel, Maser, by Palladio, 1560s (photo: Alinari).

of these towers was probably based on the century earlier ones which Palladio had introduced in his free version of the Pantheon at Maser (fig. 3).

How Palladio arrived at this composition is an unresolved problem. The theme of dome and towers was at least as old as Bramante. But the usual thing was to leave the towers detached and freestanding. Palladio probably had seen the various minute structures on the roof of the Pantheon portico, but he did not show them in the plates of his fourth book. It seems unlikely that he was alluding to the mediaeval practice of paired church towers on west fronts. It is more probable that he had a brilliant idea, which was in the direction of the Baroque effort, to increase the polyphonic richness of the portico and dome elements by incorporating additional sharply contrasting forms and integrating them with the main masses. The architects of Neo-classicism often emulated the architects of the Renaissance, who also had found the Pantheon a great stimulus to their imaginations, and, whose versions of the paradigm were equally innocent of the idea of literal imitation. Both sets of architects liked to change the proportions, or add new elements. The Renaissance masters, on the whole, were inclined to see the Pantheon in terms of lines, planes, and decoration, whereas the Neo-classicists emphasized the mass, bulk, and weight. In both cases the aims were distinct from those of academicism—it was not a matter of rules but of invention. Just as Palladio was not an Academician himself, though his followers generally were, the Neo-classicists were relatively independent

and their followers less so. In this sense, Palladio was a Neo-classicist.

Palladio's attitude toward antiquity was immensely influential. Neo-classicism was born in Italy, in fact, in his part of Italy. The debt of the English to him and to Italy is well known from the voyages of Inigo Jones down to those of Robert Adam and Sir William Chambers. Most of the Neo-classicists of all countries knew Italy well. Algarotti and Piranesi had propagandized the new ideas, so had Winckelmann, the Abbé Laugier, the Comte de Caylus, and many others. By 1775 every sophisticated person in Europe must have been aware of the Neo-classic program. Countries other than Italy produced clearer examples of the style earlier than the mother country, but later under the dominance of France and Austria, she too contributed many of the major monuments; hence the importance of Palladio's attitude toward antiquity, and particularly toward the Pantheon.

At Maser he linked the columns of his portico with garlands swinging across the compressed intercolumniations and adopted a bichromatic color scheme, which gave the design a light-hearted air of frivolity, intensified by its bijou size. There is no sycophantic solemnity about the Palladian version of the great paradigm. This is typical, I believe, of the relaxed attitude of most of his successor architects to the ponderous original, none of the Neo-classical versions seem to be hamstrung by considerations of archaeological respect. Palladio had done much to emphasize the importance of the original, but had said nothing about copying it. In his fourth book he singles out the Pantheon for very particular attention. He devotes plates 75–84 to it, nearly twice as many as he allocates to any other building; and there are two pages of text in which he uses terms like 'most celebrated', 'most notable', and 'most beautiful', and alludes to its symbolism.

Another habit of architectural historians is to condemn Neo-classical buildings out of hand for such qualities as coolness, rigidity, stiffness, dullness, and the like. This is not so much a matter of lack of feeling on their part, as of lack of understanding. Coolness, severity, rigidity were the desired aesthetic qualities. These we recognize more easily in the painting and sculpture of Mengs, Canova, Thorwaldsen, and accept in the white and gold empire interiors, and in the faint delicate lines of the engravers. But for some obscure reason, critics seem to expect Neo-classic architecture to be passionate and romantic, rather than classic and restrained. The sculptors', particularly Canova's, interpretation of the *beau idéal* was to make objects to be looked at calmly and rather dispassionately, as Mario Praz has said of Canova's nudes. The buildings, too, are deliberately reserved, aloof. They are intended to be admired, not as picturesque ruins stained and fragmented with an 'air of pleasing decay', but as calm statements of ideal grace and purity. The spectator was to be impressed, but neither aroused nor transported.

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Fig. 4. San Simeone Piccolo, Venice, by Scalfarotto, ca. 1718–1730 (courtesy Gabinetto Fotografico Nazionale).



Fig. 5. Santa Maria Maddalena, Venice, by Tommaso Temanza, 1748 (courtesy Superintendent of Monuments, Venezia).

The factor of materials should not be ignored. In America, Pantheon variants were only occasionally executed in a material of any approximation to the traditional masonry of Europe. A wooden or stuccoed building, painted white, would to this extent be further removed from the original, and the temptation to cry 'copy' would accordingly be lessened.

The elevation of the Pantheon to supremacy as the architectural paradigm—Stendhal called it 'the finest remnant of antiquity . . . sublime . . . daring'—before the Parthenon achieved that status is easily explained. It was the most completely preserved building of antiquity, the only one with an impressive interior. It was of awe-inspiring dimensions and solidity, such as few of its admirers could hope to be permitted to emulate, and it stood prominently in the heart of contemporary Rome, whereas the Colosseum was then on the outskirts. Furthermore, on less accidental grounds, it could be admired aesthetically for a variety of effects. Those ascribed to Bernini have been mentioned. The Lodoli-Milizia school could carry these further—the stark severity and almost total lack of ornamental additions, such as the portico columns innocent of fluting. Those who sought an *architecture parlante* could find a prototype in these rugged majestic and masculine forms. There are many other grounds for admiration, such as the concept that this building represented the supreme achievement of ancient architecture combining in one

forceful unit the Corinthian temple-front deriving from Greece, and the enormous vault of Roman invention. Some Neo-classicists felt that ideally the temple-front should be Greek Doric. This objective was apparently first achieved in Italy by Vantini at Brescia in 1815 and subsequently by others at Possagno and Genoa.

The notion that an exact copy of the Pantheon was desirable seems to have been alien to Neo-classic architects, partly, no doubt, because no one would pay for it, but more importantly because imitation was not their goal—they still believed in the creative powers of the architect. They believed that antiquity was to be looked to as a source of inspiration and not with a view to plagiarism. The doctrine of progress based on reason had not yet succumbed to pessimism. Such simplicities and confessions of defeat were left for a later age. Henry Bacon in his infrequently admired Lincoln Memorial in Washington was truly Neo-classical with an equal emphasis on both parts of the term. In demonstration of how much real invention went into the major monuments of Neo-classicism, I will discuss a few Italian examples.

There are two proto-Neo-classic Pantheons in Venice, the earlier by Scalfarotto (ca. 1700–1764), probably completed by 1730 (fig. 4), and Santa Maria Maddalena (fig. 5) by Scalfarotto's nephew and follower Temanza (1705–1789) about twenty years later. Wittkower calls the latter 'a corrected version of the former'.



Fig. 6. San Antonio, Trieste, by Pietro Nobile, 1826-1849 (photo: Yale Art Library).

It is unlikely that either architect thought he was copying the paradigm or even that one was correcting the other; each was creating a personal variation on the theme. The first does not adhere to the prototype in proportions, scale, or in scarcely any other respect. The portico is six units wide, not eight, and all the corner elements are piers. It stands at the top of a high flight of steps which confines access to the front. There is an added element, the sanctuary, at the rear of the cylinder. The dome rises to a spectacular height, and indeed the whole structure within as well as without has a vertical soaring feeling in sharp contrast to the static massiveness of the paradigm. A further difference, the separateness of the parts, not their unification, is stressed. It is full of lightness of the eighteenth century, of the Italian Rococo. It is true that the novelties of this building are largely eliminated in Temanza's, but again the departures from the paradigm are far more significant than the reminiscences of it. The cylinder is topped this time by a saucer dome, but the portico is flattened out against the cylinder, and consists of two widely separated pairs of Ionic columns on low pedestals. The Ionic Order is also used on the interior, and in both places without fluting. The inner wall of the cylinder moves with a regular rhythm of column, arched recess, niche, column, and so on, in no way recalling the paradigm, but strongly reminiscent of Palladio even down to the bichromatic color scheme. If anything is being improved upon here, it might be said to be the master's own version at Maser. Temanza was regarded by Milizia as the



Fig. 7. 'La Rotonda', Ghisalba, by Luigi Cagnola, 1834 (photo: Alinari).

greatest architect of his generation. One cannot agree with Milizia, but one can see why Milizia might have come to this judgment about the younger man's work, which in this instance is so orderly, unified, and disciplined. Yet, Temanza has not carried Milizia's program to its rational end, since he has not quite eliminated all ornament. Evidently it was never intended in practice to approach the logical extreme reached in some of the revolutionary projects. It was still part of the architect's duties to establish an unequivocal character by a discrete use of associative elements.

Further east at Trieste, Pietro Nobile's (1774-1854) San Antonio (fig. 6), completed in the 1840s, takes the elements of the low dome and the temple-front and arranges them over and before a long-naved church with a rectangular exterior. Sited most strikingly as the terminal feature of a long canal, it reminds one far more of a garden temple at Chiswick or Wrest, or Stra, than of the urban model.

The two most important examples of the theme in the Lombardy region are Luigi Cagnola's (1762-1833) at Ghisalba about 1834 (fig. 7), and Carlo Amati's (1776-1852) San Carlo al Corso in Milan. Cagnola uses the two basic elements of the paradigm with considerable fidelity, the deep Corinthian portico, though hexastyle rather than octastyle, and the cylindrical body supporting the saucer dome. But the static quality of the original is disrupted by his third element, a detached campanile placed to the left of the portico and in advance of the curving flank of the

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cylinder. This and the elimination of the link of an attic create a loose 'revolutionary' composition of three strikingly disparate elements varying in form, density, and surface. From the classic paradigm, Cagnola has created an asymmetrical, picturesque composition, enhanced by the elevated site.

Carlo Amati having previously worked on the Neo-Gothic façade of the Duomo adapted the Pantheon image in his masterpiece, the impressive Milanese church of San Carlo al Corso built from 1836 to 1847 (fig. 8). He used the Corinthian Order consistently and established an integrated forecourt for his temple front by lining a court with additional rows of columns, presumably echoing the temple settings of ancient Rome, though not that of the Pantheon itself. This colonnaded setting establishes a majestic, as well as a scenic, atmosphere, dominated by the dome raised on its lofty drum. The drum itself with its alternating niches and columns is an interloper in the Pantheon family, the original image of which is here recalled by the stepped flanks of the saucer dome. The contrived setting also hints at the fifteenth-century fondness for architectural perspectives. The drum is quite Renaissance in character. Amati's lavish use of columns was carried on by his pupil Antonelli in his Sanctuary at Boca and his cathedral at Novara.

The interior of San Carlo al Corso at Milan, with its coffered dome lighted from the drum as well as the oculus, has a serene unity of scale, a pleasant gradation of accents and of richness culminating at the apse. Its pavement is closely derived from the original at the Pantheon. The oculus is for practical reasons covered by a small cupola, as Palladio had done at Maser, but made more interesting by the use of angels instead of caryatids, or the more usual bare piers. Perhaps this is an allusion to Soane's use of such figures in the Bank of England, Old Dividend Office, 1818-1823, or to Borromini's campanile at Sant' Andrea delle Fratte.

A recapitulation of the un-Pantheonlike elements will indicate how far Amati was from being a copyist: the foralike colonnades in front, the linking of the portico scenographically with the colonnade, the exaggerated width of the central intercolumniation, the smoothness of the surfaces, the introduction of a quiet Renaissance drum with windows, niches, and another Corinthian Order, the use of an ornamented cupola, the changed rhythms of the interior, and the altered proportions (the height being greater than the diameter). Amati, therefore, has built an eclectic domed church incorporating a variety of traditional elements and giving the combination a distinctly original meaning—the realization of a scenographer's dream dear to men like Poussin, Claude, and Basoli.

In another great northern area, Piedmont, we find at Turin three nineteenth-century variations on the theme, not to mention the eighteenth-century Superga on its nearby hill. The earliest is Ferdinando Bonsignore's



Fig. 8. Church of San Carlo al Corso, Milan, by Carlo Amati, 1836-1847 (photo: Alinari).

(1760 [or 1767]-1843) church of the Great Mother of God (fig. 9), which is reached by crossing Turin's earliest permanent bridge. This bridge was erected by Napoleon's order, but the church was designed to celebrate one of the consequences of Napoleon's fall, the return of Victor Emmanuel I to the throne. The construction took from 1818 to 1831. Bonsignore was in late middle age when he designed this, his masterwork. He had spent some years in Rome, was a distinguished teacher, and of an archaeological bent. These circumstances may account for certain eighteenth-century qualities of lightness and elegance in his work, such as the unusually slender and widely spaced columns. They do not account for certain other novel features which may be attributed to the requirements of the site. Since the church was to be approached across a very long square and a bridge, and was to be seen against an irregular hilly background, it was set upon a high cylindrical base. The portal was reached by a long flight of thirty-two steps rising between massive podia supporting sculptural groups—a scenographic composition. The distracting 'ass's ears' have been omitted, so that the main forms read more clearly from a distance. The single cylinder of the original has been modified by a set-back at the level of the portico cornice, thus tying the upper cylinder and the attic masses together and adding more interest to the silhouette of three superimposed cylinders topped by a dome. The character of the interior reflects the elegance and lightness of the exterior decoration of the cornice and pediment.



Fig. 9. Church of the Great Mother of God, Turin, by Ferdinando Bonsignore, 1818–1831 (photo: Anderson).



Fig. 10. San Massimo, Turin, by Carlo Sada, 1845–1853. (a) Rear view, (b) façade portico (photo: author).

The two later Turinese examples, begun less than a generation after Bonsignore's was completed, depart still more widely from the paradigm. Carlo Sada's (1809–1893) San Massimo of 1845–1853 (fig. 10) looks more Georgian than Roman, with a belfry over the apse, a dome on a high drum, a long nave, and a four-column pronaos. The youngest of this trio, Alfonso Dupuy's church of the Sacramentine 1846–1850 (fig. 11), returns somewhat more closely to the paradigm. Its saucer dome dominates the exterior even though it rests on a polygonal drum which stands over a Greek cross. Its portico, added in 1870 by Carlo Ceppi (1889–1921), is a shallow Corinthian hexastyle somewhat awkwardly attached. None of these Turin examples is an imitation or copy of the original.

One of the most original variations on the theme is Pietro Bianchi's (1787–1849) well-known San Francesco di Paola in Naples (figs. 12 and 13). This church also has Napoleonic connections. Joachim Murat endeavored to beautify many of the cities of this area. He proposed to erect here a great semielliptical colonnade to regularize the area opposite the Royal Palace. This was begun by Leopoldo Laperuta in 1808 and was part way along when the Bourbons returned to their throne, an event which, as in Turin, called for commemoration in a church of thanksgiving. Accordingly Ferdinand I gave the commission to Bianchi, who began construction of the church at the axis



Fig. 11. Church of the Sacramentine, Turin, 1846–1850, by Alfonso Dupuy, portico added by Carlo Ceppi, 1870 (photo: author).



Fig. 12. Church of San Francesco di Paolo, Naples, by Pietro Bianchi, 1817–1846, and flanking colonnades by Leopoldo Laperuta, begun 1808 (photo: Anderson).



Fig. 13. Interior, Church of San Francesco di Paolo, Naples (photo: Anderson).

of the colonnade about 1817, the work dragging on till nearly the middle of the century. Laperuta's colonnade obviously owes something to Bernini's in the use of the Doric Order and its semielliptical shape, of which a more recent example stood at hand in Vanvitelli's regularization of the Piazza Dante in 1755–1767. Laperuta, in a typically Neo-classic spirit, substituted decorum for panache.

Bianchi had studied with Cagnola and, like his master, was not inhibitingly archaeological. Once more the differences from the paradigm are telling; the portico is Ionic, hexastyle *in antis* with pierced end walls. There is no attic, but instead a pair of domed cylindrical chapels link the main dome with portico and colonnade. The Corinthian Order is reserved for the interior and is used in relatively taller tiers. The proportions of the interior are changed to the diameter-to-height ratio of three to five instead of one to one. The rhythmical system is simpler with an uninterrupted colonnade of thirty-four columns, more classical than the paradigm itself. Bianchi has blended elements from the Roman, Palladian, Baroque, and scenographic systems, in which the independence of some parts is contrasted with the unification of others to make an imposing and self-confident contribution to the cityscape.

Three other variations on the theme remain for special comment. This trio have in common the idea, typical of synthetic eclecticism, of creating a new building type by combining elements from two of the most famous buildings of antiquity, the Parthenon and the Pantheon. Thus, perhaps, something new is created, something partaking of the universally acknowledged excellences of these archetypes. It is too much to say that the combinations surpass either of the paradigms, but it cannot be denied that the resulting contrasts of form are productive of novel and provocative aesthetic effects. Similar juxtapositions of well-known and heavily associative forms were a commonplace in the projects of imaginative architects at this time,

such as Boullée, Gilly, and Valadier; and Robert Mills proposed a combination of a Doric colonnade and an obelisk for the Washington Monument.

The earliest of the three Italian combinations is Rudolfo Vantini's (1790–1856) monumental cemetery at Brescia, begun in 1815, which is also the first of a series of great monumental Italian cemeteries (fig. 14). A second cemetery at Verona by Giuseppe Barbieri (1777–1838) is less important. The third of the three major examples, chronologically, is also a cemetery, that of the Staglieno at Genoa. The second major example is at Possagno, the Tempio Canova begun in 1819 (fig. 15). It is not clear whether Vantini or Canova (1753–1822), or his good friend the architect Giovanni Antonio Selva (1753–1819), was the first to realize the widely held idea. It might well have been Selva who inspired all three projects. He and Canova as young men had traveled throughout Italy looking at antiquities. Selva had also visited Austria, Holland, France, and England. He was an admirer of Robert Adam's work, had translated Sir William Chambers' *Civil Architecture*, was a friend of the widely-traveled and open-minded Casanova, had been a pupil of Temanza whose work was, so admired by Milizia, and was himself the master of the most original North Italian architect of the next generation, the urbane and eclectic Giovanni Iapelli, and had probably urged upon him his wide travels. Such a sophisticated circle must have been fully aware of the Greek architectural current flowing throughout Europe.

Vantini's chapel was a step in the direction of Possagno since he combined the cylinder and saucer dome of the Pantheon, very much reduced in size, with a tetrastyle Greek Doric portico, and applied the same order as an encircling colonnade around the base of the cylinder. Vantini's work at Brescia spread over many years. The chapel described above came first, then colonnades and subsidiary chapels (some pedimented, some domed), and in 1849 a Pharos in the form of a Greek Doric column sixty meters high. One quality which lifts this complex above the commonplace is the scale. The giant imbrications on the roof of the chapel and the relatively puny order create a relaxed rather than pompous effect.

The temple at Possagno (fig. 15) dominating Vantini's native village was undoubtedly intended to have a didactic effect on the villagers. The cornerstone was laid several months after one of its alleged architects, Selva, had died in 1819. Canova himself died in 1822, and the construction of the temple seems to have been directed by relatively unknown local people. One of Canova's disciples and close friends, Melchior Missirini, published in 1833 an illustrated work describing the building and relating its history. Lavagnino in his *L'Arte Moderna* discusses the problem of authorship at some length, since he regards the building as the best example of Neo-classicism in North Italy. Set above a curious mixture of decorated polyhedral surfaces and stairs, its double octastyle pro-

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Fig. 14. Cemetery, Brescia, by Rodolfo Vantini, 1815-1849 (photo: Alinari).

naos, Doric frieze, and bare tympanum clash violently with the unruffled cylinder. The brutality of the contrast, the severity of the detail, the empty tympanum, and the absence of color are instances of the Neo-classic tendency to be more classic than antiquity. The element of economy is not always critical, since some of their buildings were only little less costly than the paradigm. The architects took pride in their unswerving adherence to the Parthenon Doric Order, but did not attempt to reproduce the Parthenon full size. The height is only three-quarters of that, though the equality of height and diameter is retained. The interior abandons the polychrome veneer and double-story treatment, and merely resorts to a system of niches and panels without columns, producing an Empire rather than a Roman effect. The lighting is from the central oculus. The Christian requirement of a large chancel is met by a projecting apse also lighted by an oculus. An iron armature and relieving arches were used in the portico. Some of the metopes are conventionally decorated, but the central eight depict scenes from the Old and New Testament.

It is obvious that a building which incorporates elements of two disparate prototypes will not be a copy of either one. In spite of a didactic intent, absolute fidelity was not the architect's dominate concern, for his originality is apparent in many of the elements as well as in the total conception.

The third major example of this attempted fusion is that of the cemetery of the Staglieno, which in the end was less synthetic than had been at first proposed (fig. 16). Sometime before his heroic death in the plague of 1835, Carlo Barabino (b. 1768), a congenial urbanist and architect of Genoa, proposed to build the chapel at this cemetery with a Greek pronaos, a Roman cylindrical body, and an Egyptian pyramidal superstructure. The execution of the project was delayed for some years, until 1844-1851, and was then carried out by Barabino's pupil and assis-

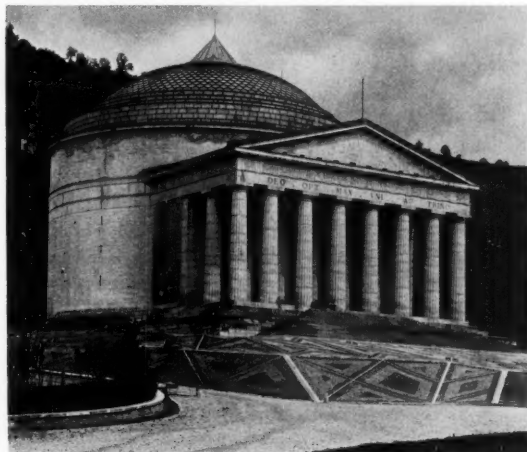


Fig. 15. Exterior, Tempio Canova, Possagno, possibly inspired by Selva, 1819-1833 (photo: Alinari).

tant, Giuseppe Antonio Resasco (1799-1872), who rather timidly abandoned the typically eighteenth-century idea of the pyramid, and following Vantini and the builders of Possagno reverted to the saucer dome. The magnificent conception of the use of the hillside, however, seems to have been Barabino's. He may have had the example of Palestrina in mind, at any rate he had spent his life coping with city-planning problems in the difficult Genoese terrain. The chapel placed high on a hill is the central feature, and is approached across an enclosed forecourt with a puristic gateway. The axis is marked by an imposing statue of faith, and back of this rises a noble but knee-wrecking flight of stairs flanked by ramps. At the chapel level long arcades reach out laterally to short returned wings. The dark hillside at the rear, against which this brilliant orderly complex is silhouetted, quickly abandons formality in favor of picturesque irregularity.



Fig. 16. Staglieno Cemetery, Genoa, by Carlo Barabini, project before 1825. Execution by Giovanni Antonio Resasco, 1844-1851 (photo: Alinari).

Once more many liberties have been taken with the paradigm: the pronaos is hexastyle Greek Doric, there is no second row of columns, the metopes depict seraphims, the entablature changes from Greek to Roman when it encircles the cylinder. The massive wings butt directly against the cylinder without transition and obscure its basic form. The upper entablature has an ornamental cresting of Greek origin. Within, there is a circular aisle separated from the nave by a row of polished black columns, a notable departure from the single static space in Rome. This is an area set apart for memorials to the architects of Genoa, an honor infrequently assigned to members of that profession. Again we have a liberal mingling of antique elements which coalesce to form something characteristic of the time in which it was built.

Several conclusions may be drawn from this material. Possagno, for instance, with its literary and associative program carried out by practically unknown men, reflects the ideals of the period more uninhibitedly than those buildings in which the intervention of trained architects tended to obscure the immediacy of the intention. This might well have been an acceptable method in a period so influenced by Rousseau's natural man. It is characteristic of this period that the work of amateurs and dilettanti has great merit, from Sanderson Miller and Walpole onwards. When associative literary emotions are the architectural

objective, amateurs may achieve the goal more directly.

A nice question is raised by the frequent omission of the prominent attic found in the paradigm itself. The effect of this omission is to emphasize the separateness and clarity of the parts—cylinder, portico, and dome—thus becoming less true to the classicism of antiquity but, by heightening the effect of collision, becoming more Neo-classical.

A major conclusion is that copying and imitating was not the program of the Neo-classical architect. His goal was to create new buildings true to his time, deriving general ideas and even particular details from the past, as all architects have been forced to do, but making a new work of art, expressive of different ideas and moods. His primary demands were simplicity, orderliness, solidity, majesty, contrast, and clarity.

As there was no desire to copy, so there was no desire to push the program of the rationalists to its logical extremity. None of these architects, however much they favored clearness and the independence of the parts that they so boldly juxtaposed, sought wholly to eliminate ornament or decoration. It was still their intention to establish the character of the building in an unequivocal manner, and to defer to the heiratical distinction between the ordinary and the ecclesiastical, more often than not by using forms with traditional associations. The goal of Neo-classicism was not archaeology but evocation.

G. E. Street in the 1850s

HENRY-RUSSELL HITCHCOCK Smith College

ALTHOUGH George Edmund Street (1824-1881), R.A., F.R.I.B.A., missed the knighthood that crowned the architectural careers of Charles Barry and George Gilbert Scott, he received the top professional honors; he might well, like several rather less distinguished presidents of the Royal Institute of British Architects, have been knighted but for the notable row that preceded his election. Like Sir John Soane and C. R. Cockerell, he also became Professor of Architecture at the Royal Academy—he had been elected an Associate of that body in 1866 and a full member in 1871—but only in 1880, the year before his death. Earlier, however, in 1874, when the construction of his best-known work, the Law Courts in London, had just begun, he was awarded by the Queen on the recommendation of the Institute the Royal Gold Medal. That is an honor whose foreign recipients have included a long line of the greatest architects, including in our own day Perret, Wright, Gropius, Le Corbusier, and, most lately, Mies van der Rohe and Nervi.

Although A. E. Street published a lengthy *Memoir* of his father in 1888 and his former assistant Philip Webb's account of Street's career fills several pages of the *Dictionary of National Biography*, his work has not received in the present century as much attention as that of Butterfield and his name is certainly not as well known as Scott's. Yet it has hardly been altogether forgotten.¹ There are several reasons for being interested in the not inconsiderable production of Street; and most writers on the Gothic Revival, beginning with Eastlake in the 1870s,² have commented on and usually illustrated some of his more prominent works.

In *Early Victorian Architecture in Britain*³ and again in *Architecture: Nineteenth and Twentieth Centuries*⁴ I have had occasion to give some attention to his work. But what is needed is a more continuous account of an *oeuvre* which was not only of intrinsic distinction but also very influential.⁵ Above all, adequate photographic illustrations, including some in color, should help to return to Street something of the high reputation he had with his contemporaries.

A special facet of the interest posterity may well have in Street is the fact that his assistants and pupils included two of the leading architects of the next generation, Philip Webb and Norman Shaw; and that in Webb's case at least, if to a somewhat lesser degree for Shaw, the younger man's earliest work developed directly out of his experience in Street's office. Webb's first client and frequent collaborator, William Morris, was also employed very briefly by Street. Hence the decorative work of this greatest nineteenth-century master in that field, as also some of his ideas concerning architecture, are very much more likely to have had their origin in Street's office than in the studio of Rossetti, however much Morris also owed to the writings of Ruskin.

Two particular periods of relatively short duration in the long career of Street, one in the mid and late 1850s and another in the early and mid-1860s, can be related, on the one hand, to the years from 1854 to 1859 when Webb was his principal assistant and, on the other, to the following years when Shaw gradually took over this position. Although it was the competition of 1866 for the Law Courts that made Street a center of exacerbated public

1. A talk by John Betjeman on Street was the principal feature of the first meeting of the new Victorian Society in 1959 and was actually given in the Law Courts.

2. Charles Lock Eastlake, *A History of the Gothic Revival* (London, 1872), pp. 321-326. This Eastlake was not the Director of the National Gallery, Sir Charles Eastlake, but his son, who was the author of *Hints on Household Taste* (London, 1868, and several later English and American editions), a book which made his name a 'household word' in America, though not in England.

3. H. R. Hitchcock, *Early Victorian Architecture in Britain*, 2 vols. (New Haven, 1954), pp. 601-605. Henceforth cited as *E.V.A.*

4. H. R. Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth, Middlesex, 1958), pp. 174, 175, 178, 180, 186, 200-201, pls. 94, 100. Henceforth cited as *19th & 20th*.

5. Just as this article was approaching completion I learned that R. J. Lambert of Sidney Sussex College, Cambridge, has in hand a book on *George Edmund Street and the Gothic Revival*.

controversy, and the Law Courts remain the largest and the most conspicuous of Street's productions, it is possible to claim that Street's most important works were those of the ten years or so that began, coincidentally doubtless, with his employment of Webb in 1854. But first one should look back a little to the start of his career.

The earliest architectural productions of Street, beginning when he left Scott's office at the age of twenty-four,⁶ are touched on in the already cited pages of *Early Victorian Architecture in Britain*. As that account is both very brief and somewhat inaccurate, some further information may well be given here. Of St. Mary's, Par, in Cornwall, Nikolaus Pevsner has written: 'G. E. Street's first church, 1848-9, and a remarkable work for a beginner, of a freshness and charm not often achieved or aimed at by Street. The steeple on the Lostwithiel model is low, of comfortable, reassuring proportions. It stands at the w. end of the s. aisle. The windows of the church are all plain double lancets, and at the s.e. corner a fine effect is obtained by three different lengths. Inside the most curious motif is the little triangular window in one of the sedilia niches—Pink stone of a surface which looks mellow and lovable after a hundred years.'⁷

Street's other very early work consisted principally of restorations carried out elsewhere in Cornwall, but in several cases as yet unidentified apparently by modern writers.⁸ At Probus in Cornwall, however, where Street restored the church of St. Probus in 1849, he also built the small school to the east, perhaps the very first example of a type of modest church-linked commission with which he would still be busy long after much more important opportunities came his way.

Not in Cornwall, but also in the southwest, was the new chancel added to St. Peter's, Plymouth, a 'reclaimed conventicle' in the words of the *Ecclesiologist*,⁹ official organ of

6. Mr. Lambert has evidence of independent work a year or two earlier than this, I believe, but I must leave the matter to be elucidated by him.

7. Nikolaus Pevsner, *Cornwall* (Harmondsworth, Middlesex, 1951), p. 115.

8. There is understandable confusion about St. Peter's, Treverbyn, a church which Pevsner does not mention in his *Cornwall* volume. The description of this in the *Ecclesiologist* xi, 259, is wrongly said to apply to St. Mary's, Colton, in Staffordshire. This is corrected in xii, 70; but the description there, which concerns chiefly the parsonage and school, leaves it uncertain whether any of this group, forming a sort of quadrangle premonitory of that at All Saints', Maidenhead, was built—'. . . it will be built of the rough stones of the moors' (italics supplied).

9. *Ecclesiologist* (henceforth abbreviated *Ecl.*) xii, 156 and one plate. This was presumably designed and begun before Street moved to Wantage in 1850. But the date of publication of the design (1851) makes this uncertain. Street's ingenious scheme for turning the auditorium of the edifice into a sort of hall-church by introducing a nave 'arcade' of wood under the flat ceiling was not carried out. It makes one think a little of American church interiors by Upjohn and others which were, as a matter of fact, often approved by the Ecclesiological Society.



Fig. 1. School, Denchworth, Berks. (photo: National Buildings Record.)

the Ecclesiological Society, where the design was published. This was retained when the body of the church was rebuilt by G. Fellowes Prynne in 1880-1882.

In the chancel that he restored in the church of St. Mary and Sts. Peter and Paul at Sheviok in Cornwall the glass in the east window was executed by Wailes in 1851 from Street's designs.¹⁰ Wailes was also responsible for the glass in St. Mary's, Par.

Among the restorations on which Street was working in the very late '40s in other counties, one at Sundridge in Kent was of special importance as it brought him into close contact with Benjamin Webb, from the first one of the leading figures in the Ecclesiological Society (of which Street had been a member since 1845¹¹) and still the Society's secretary. It was Webb who recommended Street to the Rev. William John Butler, a prominent Tractarian who had become vicar of Wantage in Berkshire in 1846, and also to Samuel Wilberforce, Bishop of Oxford. These connections proved of great value in the early years of his career.

Settling in Wantage in 1850,¹² he built the vicarage for Butler that year and was at once involved in a great deal of restoration of churches and school-building in the vicinity. Butler himself was a particularly good client; after the vicarage, Street built for Butler several other things at

10. See Street's contemporary 'Letter about East Windows', *Ecl.* xii, 77-78. Stained glass provided later the subject of another article by Street, 'On Glass Painting', *Ecl.* xiii, 237-247.

11. Street had taken part in a debate on 'destructive restoration' in 1847, *Ecl.* vii, 237-240, while still in Scott's employ, and he published a 'Letter on Lychnoscopes' two years later, *Ecl.* ix, 348-352. His name, at least, must already have been familiar to Webb when they met in Kent.

12. This year Street also made a modest debut at the Architectural Exhibition in London, showing pulpits he had designed for the church at Hadleigh, Middlesex, which he was restoring, and for St. Mary's, East Barnet, in Hertfordshire.

Wantage, notably the church school and St. Mary's Retreat, the head house of the Wantage Sisterhood, an important order of Anglican nuns founded by Butler. To the very early '50s belong various other new works in Berkshire: the small chapel of Heathfield School,¹³ Chavey Down, at Bracknell, and the church schools at Stanford-in-the-Vale, Denchworth (fig. 1), Inkpen, and East Challow.

Modest churches at Eastbury in Berkshire (St. James's, consecrated 1853) and at Colton in Staffordshire (St. Mary's) were also building at this time. Of the former John Betjeman and John Piper have written: '... Victorian stone church, with a huge roof and double sanctus bellcote. Its interior is useful and practical, but not beautiful.'¹⁴ If it does not appeal to these connoisseurs of nineteenth-century church architecture it is not likely now to interest anyone else. The *Ecclesiologist*,¹⁵ however, found St. James's 'very picturesque' because of the varied slopes of the roofs, although for the reviewer it resembled too closely the French Flamboyant in some respects, while in others it recalled German Gothic. (Many ecclesiologists were still loath in the early '50s to accept Continental forms, although the Society was then sponsoring Butterfield's epoch-making church of All Saints', Margaret Street, in London).

Another small contemporary Berkshire church at Finkins had a Continental five-sided apse, while the lozenge-shaped opening in the west gable was imitated from those in the mediaeval barn whose stones provided the material of which the church was built. This is certainly an early instance of the sort of rather coarse detailing that was already being admired as 'real', even if it was still considered rather 'uncouth'.¹⁶ I have described elsewhere the tiny school at Inkpen,¹⁷ significant for its modest but very early use of polychromy. Street's first ambitious church project, shown in the Architecture Room of the Royal Academy in 1851,¹⁸ will be discussed later.

Although Street long continued to do work at Wantage and nearby, he moved on after two years to Oxford at the suggestion of his friend the bookseller and antiquary John Henry Parker, settling in Beaumont Street there in May 1852. It is then that his mature career may be considered to begin, even though he was still under thirty.¹⁹

Street's rising reputation at this point had led to his appointment (honorary, at least at first, according to Philip Webb in the *D.N.B.*) by Bishop Wilberforce as architect to the Oxford Diocesan Commissioners.²⁰ It was doubtless on the strength of this that he married in 1852. Until 1856, when he moved to London to live and work at 33 Montague Place, Russell Square, his headquarters were at Oxford.

It was at Oxford, his own birthplace, that Philip Webb joined Street. On 16 May 1854, he became his pupil and assistant at £1 a week after having spent a depressing month with the obscure firm of Bidlake & Lovatt in Wolverhampton at twice that salary.²¹ The next year, however, Street raised Webb's pay to £100 a year; and by the time he left Street in the spring of 1859 to design and build the Red House at Bexley Heath in Kent for his friend Morris (whom he had met in Street's office²²) he was earning £160 a year.²³

The years 1852-1859, and more particularly 1854-1859 while Webb was his assistant, represent an especially important period in Street's career. Twelve years younger than Pugin, whose career ended in 1852 just as Street began to make his mark, ten years younger than Butterfield, who first received wide acclaim with the building of All Saints', Margaret Street,²⁴ in these years, Street shared in some sense the Puginian heritage with Butterfield and after the middle of the decade was the latter's generally recognized rival.²⁵ Indeed his first major church, All mature careers really start. Pugin, of course, had been even more precocious, and died in this year (1852) at the age of forty. Butterfield had not been at all precocious; moreover, it may even be considered that Street 'caught up' with him by the middle of this decade.

20. Later, after this sort of position was more widely established, Street became Diocesan Architect of London, York, Ripon, and Winchester.

21. Edmund D. Sedding had come into the office the previous year, presumably as pupil and assistant also, but had left because of illness before Webb was taken on.

22. William Morris had been in Oxford since January 1853, when he entered Exeter College; but he was not employed by Street until 1856, just before Street's move to London. After a very short time he left to take up painting under Rossetti with his college friend Edward Burne-Jones. 1856 also saw Morris's debut as a poet in the *Oxford and Cambridge Magazine*, which he financed. In 1857 he first found his other true forte as a decorative artist in executing the ceiling of the Oxford Union.

23. The detailed information concerning Webb's employment by Street is not to be found in W. R. Lethaby, *Philip Webb and his Work* (London, 1935), but has been generously communicated to me by John Brandon-Jones from Webb's account book, which is in his possession.

24. This epoch-making London model church of the Ecclesiological Society was designed in 1849, largely built over the years 1850-1853, and finally consecrated after the completion of the decorations in 1859. See *E.V.A.* i, 580-594; ii, figs. xvii 1-11.

25. In many ways R. C. Carpenter, the Ecclesiological Society's other favorite architect, was the truest Anglican disciple of Pugin, but he died in 1855. See *E.V.A.* i, 147-151, 579, 580; ii, figs. v 16-17, 20-24.

13. The chancel was added in 1900.

14. In *Murray's Berkshire Architectural Guide* (London, 1949), p. 124. Curiously enough they give the date of construction there as 1867, although on page 93 it is correct: 1851. The wrong date, which is repeated in R. L. P. Jowitt, *Berkshire and Oxfordshire* (Harmondsworth, Middlesex, 1950), p. 165, probably refers to a later addition made by Street to the original edifice.

15. *Ecl.* xii, 150.

16. *Ecl.* xiv, 136.

17. *E.V.A.* i, 601-602, largely from *Ecl.* xii, 70.

18. *Builder* (1851), p. 307.

19. All the work of Street discussed in this article was under way by the time he reached thirty-five, the age at which most architects'

Saints', Boyn Hill, at Maidenhead was actually consecrated in 1857, two years before All Saints' in London. The heritage of Pugin, which passed via Street to Webb, is most apparent in his minor works, the church schools and the vicarages following along the line of those already mentioned (see below). The rivalry with Butterfield in this decade is best illustrated by the Maidenhead church and by St. James-the-Less, Westminster, as well as by several major projects that never came to execution. But Street's high standing among his fellow ecclesiologists, and more generally with the architectural profession, depended at least as much on his writings as on his projects and his executed buildings.

After Ruskin, Street was the most influential critic closely associated with the High Victorian Gothic. Moreover, since Morris actually worked for Street in these years, Street's ideas and ideals (as has already been remarked) must have played some part, along with Ruskin's, in forming the creed of the next major architectural critic in the distinguished line that began with Pugin. As much as Ruskin, certainly, it was Street who made the Continental Gothic both acceptable and available as a source of inspiration to his contemporaries. If Street's trips abroad were somewhat less frequent and much more hastily conducted than Ruskin's, what he brought back—especially from Italy—was presented to architects in considerably more usable form. His studies of foreign Gothic architecture culminated in the next decade with his book on Spain,²⁶ yet curiously enough that never had the influence on current English production of his earlier and more superficial reports from the Continent. Street's most important critical writings, moreover—like Ruskin's principal pronouncements on architecture, which were all made in the years 1849–1853—appeared in the early '50s, just as those were also (not unnaturally) the years when he absorbed the most from what he saw on his Continental excursions. At that point Street obviously studied the Gothic of other countries primarily as an architect; his later approach to the Spanish Gothic was more that of an antiquary or archaeologist.

If Street lacked the intense individuality of Butterfield, he was not a mere 'copyist', either of English or of Continental Gothic, but rather worked along the line that was then usually called 'development'.²⁷ Street, indeed, led the stylistically progressive wing of the Gothic Revival far more effectively than the better-known and more vocal Scott, the first outright Gothickist to be elected an Associate of the Royal Academy (in 1855). This is not easy for

posterity to accept, since Scott was in his avowed principles more of an innovator and not, like Butterfield and Street, at all averse to using new materials such as iron and glass.²⁸ Yet it is a major historical paradox of the late '50s and '60s that the forward line of 'development', in England at least, did not lie along the obvious line of the ferro-vitreous architecture of the Crystal Palace but in the highly sophisticated neo-mediaevalism of Street, his pupils, and those who emulated them.²⁹

Street's earliest trips outside his native land had been to northern France in 1850,³⁰ and to Germany and Belgium in 1851.³¹ In 1853 he went not only to Germany again, but also to North Italy, following in the latter part of his itinerary quite intentionally in Ruskin's footsteps. But his Italian studies—which were certainly already reinforcing overt Butterfieldian influence at the Adderley Park Institute in Birmingham and at All Saints', Maidenhead, both begun in 1854—found no published outlet un-

28. Those principles were best presented a few years later in his *Remarks on Secular and Domestic Architecture, Present and Future* (London, 1857).

29. There is perhaps a parallel in the political reforms carried out in the third quarter of the century by Disraeli and the Tories.

30. Although Street's use of a drawing of the Synod Hall at Sens as frontispiece in *An Urgent Plea* . . . in 1853 provides evidence that his admiration for French Gothic preceded first-hand acquaintance with that of Italy, what was called by contemporaries 'Early French' influence is hardly significant in his own designs before 1860, except of course for his project of 1855 entered in the Lille competition and that of the following year for the Crimean War Memorial Church in Istanbul.

According to the notes in Webb's account books communicated to me by Brandon-Jones, Street made further short trips to France in 1855 (three weeks from 13 June) and in 1856 (a fortnight from September 20), the first presumably in connection with the Lille competition. It is perhaps as much evidence of Street's increasing interest in French Gothic in the later years of the decade as his own published notes of 1858 on the subject (in *Ecl.* xix, 362–372) that Webb and Morris on their expedition abroad in the summer of the same year (16 August–22 September) went to France, where Morris had already been on summer trips in 1854 and 1855. The excursion cost Webb only 309 frs. 30 c., he recorded in his account book!

It may well have been the superb drawings of French mediaeval architecture so well reproduced in Norman Shaw's early publication, *Architectural Sketches from the Continent* (London, 1858), that led to his employment by Street when the latter realized that Webb would shortly be setting up for himself.

31. Although German influence was noted in Street's work by sensitive contemporaries as early as the *Ecclesiologist's* review of St. James's, Eastbury (*Ecl.* xii, 150), and is, perhaps, evident even to posterity in the Cuddesdon College, he made no report after his trip of 1851. Later he had a good deal to say about German Gothic. Papers read at the meetings of the Oxford Architectural Society, his usual forum in the '50s, were published as follows: on Naumburg Cathedral, *Ecl.* xv, 381–386; on the churches of Lübeck, *Ecl.* xvi, 21–36; pamphlet [Oxford?, 1854]; summarized in the *Builder* (1854), 647; on Erfurt and Marburg, *Ecl.* xvi, 73–82; and on Munster and Soest, *Ecl.* xvi, 361–372. Later came a more general paper on German Gothic read before the Oxford Architectural Society, *Ecl.* xviii, 162–172; summarized in the *Builder* (1856), 318.

26. *Some Account of Gothic Architecture in Spain* (London, 1865); 2nd ed. (London, 1869); (G. G. King, ed.), 2 vols. (London, 1914). This was based on three trips made in 1861, 1862, and 1863.

27. For the controversy of the early '50s over 'copyism' versus 'development' see *E.V.A.* II, 605–607.

til the appearance of *Brick and Marble in the Middle Ages: Notes of a Tour in North Italy* in 1855.

His most significant speaking and writing immediately after he settled in Oxford was not descriptive but critical, like his important paper of 1850 'On the Proper Characteristics of a Town Church'.³² His paper on 'True Principles in Architecture and the Possibility of a Development founded Thereon' was read before the Oxford Architectural Society on 18 February 1852,³³ several months before he moved to Oxford. Street was still basically Puginian, if in disagreement with the last stand on architecture—in strong opposition to 'development'—that Pugin took before his madness and death. 'Whatever is truthful must be in itself lawful and good', Street wrote but he added, significantly, 'though it have no old precedent in its favour'. First principles are constructional and the pointed arch was the greatest of all inventions in construction. Yet, even so, there are still possibilities of development in the use of the pointed arch. Foreign examples of architecture should be examined, even Classical buildings, to see if any beauties exist in them that might be available for all time, such as the long horizontal lines for which he had already expressed admiration in his paper of 1850 on town churches.

Turning to structural coloration, in Street's estimation another major opportunity for development, he had much to say. Light quoins with dark walling are to be avoided as suggesting weakness; bands of colored materials used in walls should not be of equal width, the lighter bands should always be the wider; strong forms such as circles

should be used in spandrels (a Ruskinian doctrine already enunciated in the *Seven Lamps of Architecture* in 1849); but arches should have concentric rims of color, not alternation of color in the voussoirs—something concerning which he later changed his mind. Then came an early tribute to All Saints', Margaret Street, where 'his friend Mr. Butterfield' has shown what can be done with brick, 'our most available material'. All Saints' is 'the first in a long series in which more and more improvement may be looked for.' He approved the use of colored tiles for wall decoration and on cornices and stringcourses; while green or other strong colored glazed tiles for roofs, such as those with which he was then patterning that of the chancel of St. Michael's-at-the-North-Gate, Oxford, in a restoration of 1852-1854, were also suggested. In conclusion he recalled, as several architects and critics were doing at this time, that the display of building materials at the Great Exhibition in 1851 had revealed how extensive was the available national repertory of colored marbles that he and others were already using with ever-increasing lavishness on reredoses and fonts.³⁴

In 1853 Street made two more important critical statements. In a paper read before the Oxford Architectural Society on 16 February on 'The Revival of the Ancient Style of Domestic Architecture' he agreed with other contemporary critics that the Gothic Revival had thus far been less successful with houses than with churches, claiming that most modern attempts were as 'unreal' as classical imitations in this field of building.³⁵ Excessive irregularity of outline, avoidance of the pointed arch—that 'prime constructional invention'—as well as ridiculous interiors with 'Gothick' rather than plausibly mediaeval furniture: these were his principal objections to most modern secular work.

The important book by T. Hudson Turner, *Some account of the domestic architecture of the Middle Ages*, of which the first volume on the Norman and Early English periods had been published by Parker at Oxford in 1851, was being continued since Turner's death by Parker himself.

34. The polychrome marble reredos and altar canopy Street provided for St. Michael's like the colored tiling of the roof have gone—the bold pattern on the roof is visible, however, in old photographs. The reredos, reputedly shown earlier at the Great Exhibition (which seems rather unlikely), was given by Street himself; from the first it was considered 'too showy and more of the character of a Popish than a Protestant place of worship'. The east window, heightened by Street by ten feet when he raised the roof to its presumptive thirteenth-century pitch, was filled with stained glass given by certain undergraduates of Exeter College of whom Morris was one—presumably his initial contact with Street, if indeed they actually met in this connection. Later, in 1859, Morris married Jane Burden here. When the restoration was completed Bishop Wilberforce preached on 16 March 1854 at a special service. See R. R. Martin, *The Church of St. Michael at the North Gate Oxford*, 5th ed. (Gloucester, 1957).

35. Published in *Ecl.* xiv, 70-80; summarized in *Builder* (1853), 140.

32. This had been read to the Ecclesiological Society on 16 May 1850, at a meeting attended by Benjamin Webb, Beresford Hope, and Lord Campden among the non-professional ecclesiological leaders, and by Carpenter, J. L. Pearson, and George Truefitt among architects. See *Builder* (1850), 249. The paper was published as a letter in *Ecl.* xi, 227-233, and is summarized in *E.V.A.* i, 604-605. Before a different audience, the Exeter Diocesan Architectural Society, he had read another more antiquarian paper in 1850 on 'Distinctive Features of the Middle Pointed Churches of Cornwall' which appeared as a pamphlet (Exeter?, 1850). In 1851 came an illustrated article (*Ecl.* xi, 31-42, 5 pl. preceding text) on certain Kent and Surrey churches that Street attributed to a single mediaeval designer. The preparation of this must have entailed much learned consultation with Benjamin Webb. That year, doubtless partly as a result of this close relationship with the Society's secretary, Street was commissioned by the Ecclesiological Society to design embroideries to be shown at the Great Exhibition. See *Builder* (1851), 81. The considerably more important commission from the Society to design a church for Tasmania has been mentioned once already.

33. Published in *Ecl.* xiii, 247-261. Although the *Builder* had been none too sympathetic earlier to ecclesiologists, the excellent news sense of the editor, George Godwin, is indicated by his summarizing this article, *Builder* (1852), 157, and several others by Street from the *Ecclesiologist*. 'Development' was a sympathetic idea to Godwin, who strongly opposed 'copyism'; by 1852, moreover, Street was becoming favorably known outside his own rather exclusive Tractarian circle.

The second volume, covering what had for some time been accepted as the 'best period' of English mediaeval architecture, the Edwardian or Early Decorated, had just appeared in 1853. Street could therefore refer to this major archaeological study for convincing evidence that pointed arches, traceried windows, open timber roofs and such supposedly ecclesiastical features were as much in place in domestic work as in churches. Yet he did not forget the desirability of 'development'. Sash windows, he urged, might properly be used within or behind stone or brick tracery (much as Butterfield was using them in the clergy house and school of All Saints', Margaret Street), and other departures from old precedents might be necessary and permissible in order to enable 'Pointed' architecture to meet all the requirements of the mid-nineteenth century.

Slightly later, his *Urgent Plea for the Revival of True Principles of Architecture in the Public Buildings of Oxford*³⁶ is particularly concerned with the design of the new University Museum which was soon to be built. Street naturally feared that, like the Victorian buildings of the '40s at Oxford, it would be either Classical as was Cockerell's earlier museum, the Taylor and Randolph Buildings (now the Ashmolean), or that sort of Tudor in which so many of the colleges had continued—or revived—in their new additions the most 'debased' traditions of early seventeenth-century Oxford. Archbishop Laud's was a 'golden age' to Street and his fellow ecclesiologists theologically, but not architecturally!

Street restates in his *Urgent Plea* much of his general argument concerning domestic architecture, with a more specific recommendation of the detached window-colonnettes of France and Germany as substitutes for English mullions. Not only might such colonnettes be of colored marbles—thus providing structural coloration—but they would also readily allow the use of sash-windows behind them—a convenient adaptation to the modern age. Important as are these reiterated pronouncements, making it evident that Street was indeed a more articulate Butterfield, a less systematic and verbose Ruskin, they were not as generally influential as the illustrations in the *Brick and Marble* volume of 1855, which presumably reached a much wider professional public.

The profusion of carefully executed wood engravings in that and the simple color lithographs, showing brick and stone in various combinations, were far more useful, moreover, as sources of direct 'inspiration' (i.e., for contemporary architects to borrow from) than the very restricted range of visual models provided in Ruskin's so much more

famous books of 1849–1853. The *Builder* paid a good deal of attention to the work, referring to Street as Ruskin's 'umbra', repeating many of his illustrations, quoting at length from his text in an article on 'Colour in the Construction of Buildings', and even giving its generally favorable review the position of a 'leader'.³⁷ Street's friends on the *Ecclesiologist* hardly did as much for it, although their actual review was both longer and warmer.³⁸ By this date Street was evidently considered the leading proponent among architects of what posterity has generally thought of as Butterfield's peculiar contribution to Victorian Gothic: the revival of the use of brick for churches and the introduction of various kinds of banding in color. Street's first serious demonstrations of such 'permanent polychrome', however, had actually been initiated at Birmingham and at Maidenhead only the previous year.

The early '50s were crucial for the development of the High Victorian phase of the Gothic,³⁹ and it is time to turn now from Street's writings of these years to his major executed works and projects, the things which almost at once made him Butterfield's principal rival. Despite its very early date, it will be well to start with the Tasmanian project of 1851, since it is of much grander scale and greater elaboration than any church he actually built before the one that was begun at Maidenhead in 1854.

By 1851 the Ecclesiological Society was giving to Street some of the rather tedious little jobs Butterfield had so long done for them, such as the already-mentioned commission to design ecclesiastical embroideries for the Great Exhibition. But just as Butterfield and Carpenter and also William White had earlier been invited to prepare projects for colonial cathedrals in Asia and America and Africa, Street was now recommended as architect for an important church at the Antipodes. His design for St. John Evangelist's in Hobart, Tasmania, as exhibited at the Royal Academy in 1851, had many novel features, some Butterfieldian, some Continental, although apparently no structural coloration (due to lack of knowledge of the available native marbles, doubtless). The chancel was apsidal, a non-English feature hitherto usually disapproved by the *Ecclesiologist* but already used by Street at Filkins. The clerestory was tall, with large windows, as at Butterfield's St. Matthias's, Stoke Newington. The 'steep-eaved' roofs of the apse and the high metal cresting against the sky had a Continental air. The enormous oblong tower over the choir, both in its placing and in its gabled roof, as well as the western buttress rising awkwardly between the two lights of a large window, were even more obviously than the clerestory directly derived from Butterfield's still unfinished London suburban church.

36. Pamphlet, Oxford, 1853. The plates include the already-mentioned frontispiece of the Synod Hall at Sens, one of Merton College, and a project for the Oxford Museum which will be discussed later. This pamphlet was noted in *Ecl.* xiv, 140, and summarized in *Builder* (1853), 433–434.

37. *Builder* (1855), 377–378, 421–423, 427, 599–600.

38. *Ecl.* xvi, 299–305.

39. See the whole last chapter, 'Ruskin or Butterfield', in *E.V.A.* That complements, and to some extent is overlapped by, the account of Street's critical activities of the early '50s given here.

The Society approved the design, although their reviewer considered it 'perhaps too unusual for the colonies'.⁴⁰ He felt obliged, however, to warn its able young author again, as in the case of St. James's, Eastbury, to 'beware his leanings to the picturesque'. 'The true picturesque follows on the sternest utility', was the reviewer's lapidary pronouncement, which is certainly one of the soundest critical statements ever made in the name of the Society, and the very essence of 'realism' in architecture as the High Victorians understood it.

Hobart (then called Hobart Town), although founded some half-century or more earlier, must still have been considerably less urban even than outlying Stoke Newington; but it was the principal town in Tasmania, and Street understandably used this commission from the Society to illustrate his idea of what a 'town church' should be. Equally, of course, it displayed his capacity as a follower—not yet a rival—of the Society's favorite architect along the bold new lines of 'development' that Butterfield had initiated the previous year in the designs for his two London churches.⁴¹

The modest churches Street was actually building in the early years after he settled in Oxford may better be discussed later along with his parsonages and schools, for the Diocesan Commissioners gave him no large ecclesiastical jobs. His principal early work for them was the Diocesan Theological College, just founded by Bishop Wilberforce, which was built at Cuddesdon opposite the seventeenth-century bishop's palace, together with the restoration of the parish church of All Saints' and the erection of a new parsonage there. Indeed it is with this college—the design for which must have been prepared in 1852 since the cornerstone was laid early in 1853⁴²—that his mature career is usually thought to have begun. Here there is no structural coloration; but a quite Butterfieldian vigor and—not surprisingly considering Street's early travels—a rather Germanic flavor inform the whole.

Perhaps the picturesqueness of the design derives only from the 'sternest utility', but the marked plastic articulation of the various sections of the edifice, still in the Early Victorian tradition, is more notable than the long horizontal lines and regularity for which Street had called as a critic. This is not, however, an urban building. There is little detail and everything is very 'real', i.e., masonlike; the prettiness and petty scale of most earlier collegiate

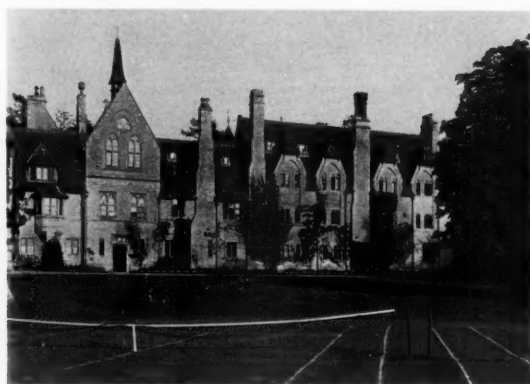


Fig. 2. Diocesan Theological College, Cuddesdon, Oxon. (photo: National Buildings Record, cop. Rev. Sumner).

Gothic other than Butterfield's St. Augustine's College in Canterbury have been given up. Instead, certain rather clumsy features, such as the irregularly divided triplet windows and the projecting hipped caps on the dormers, recur like the difficult chords that Wagner was just then beginning to use with striking effect in music (fig. 2).

The *Ecclesiologist* found the college to be 'constructed on true principles of design',⁴³ but considered that the detail recalled 'perhaps too plainly a German type of Domestic Pointed work'; while the tracery in the oratory window (over the dining hall), like that at Eastbury, was too late in style—indeed it was condemned outright as 'Perpendicular!'

The Cuddesdon College has been so much changed and added to that it is not very easy today to appreciate the original work of 1853–1854. The passages are still too narrow, as the *Ecclesiologist* complained in 1854, but as at St. Michael's in Oxford the striking colored tiling of the roofs has gone. Even the sympathetic reviewer thought this too 'pronounced', however. Street's special sort of 'realism' can be better studied today in more modest work.

Two comparable institutional commissions, one of which certainly followed closely upon the completion of the Cuddesdon College and the other of which may possibly have done, apparently led to little or no executed work in this decade. At Bloxham near Banbury in Oxfordshire Street was called in by the Rev. John W. Hewett in 1854 to provide plans for a very extensive 'Collegiate Institution' of which Bishop Wilberforce laid the cornerstone on 7 June 1855.⁴⁴ Of this project only four bays on the north side of the central court facing the Banbury Road were built be-

40. *Ecl.* xii, 127–128, 150–152. Apparently the church had actually been begun in 1846 from a design by Carpenter based on his church of St. John the Baptist, Cookham Dean. The relation of this to Street's much more ambitious project of 1851 is not clear—nor, for that matter, important, since Street's was never executed.

41. Neither, of course, was very far advanced toward completion at this point, but the designs were certainly known in the inner circles of the Society to which Street already belonged.

42. *Illustrated London News* (henceforth *I.L.N.*) xxii, 308; further description, xxiv, 607–608.

43. *Ecl.* xv, 238–241. At the opening on 15 June 1854, the clerics all appeared in very 'advanced' vestments it may be worth noting.

44. *Ecl.* xv, 398; xvii, 152; *Builder* (1855), 296; *Gentleman's Magazine*, New Series, xlii, 68.

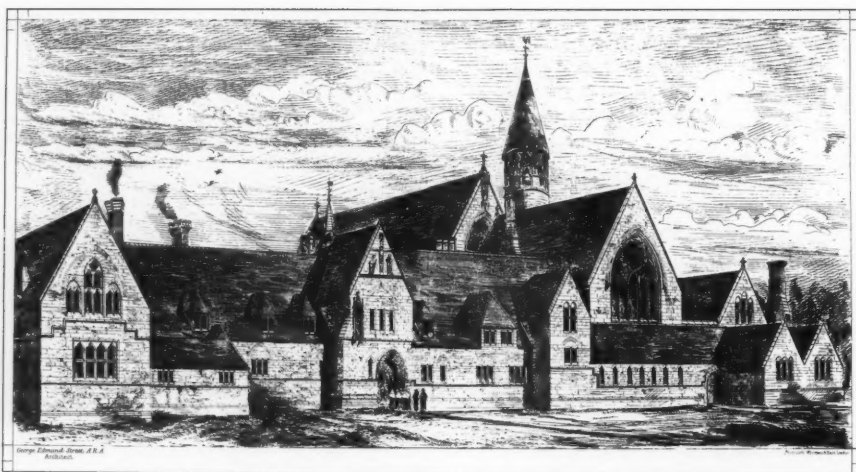


Fig. 3. St. Margaret's Convent, East Grinstead, Sussex (from the *Building News*, 18 December 1868).

fore the Rev. Hewett's ambitious plans foundered. In 1859 a new start was made under another proprietor; but the relatively modest buildings Street erected in the early '60s did not follow the original scheme which is known from a lithographed perspective of a drawing by Street.

Unhappily I have never seen this perspective and I am greatly obliged to Mr. R. J. Lambert for allowing me to quote from a letter his description based on a photograph of the lithograph in his possession:

The design is important as being [Street's] most ambitious project to date (it is much larger than Cuddesdon), and as exemplifying [the] dichotomy of [Street's] idiom as it emerged in the mid-fifties. . . . There were two courtyards, the larger enclosed by school rooms, chapel, refectory, etc., the smaller surrounding (of all things) a graveyard. Kitchens, etc., were given a separate block south of the refectory. The materials . . . were to be of local stone with Corsham stone dressings. Cloisters ran round each court.

Like the materials, the style of this building is in marked contrast with Boyn Hill [see figs. 5-8]. . . . It is in [Street's] Berkshire parsonage and Cuddesdon manner—a variant on English Geometrical Decorated. Some details do hint a foreign influence—the French *flèche*, a touch of plate tracery, an Italian-looking tabernacle. But otherwise the motifs are all of his Wantage-early-Oxford phase: battered chimneys, dormers, characteristic roofs, fenestration, etc. The principal court, though nearly square, is, of course, treated asymmetrically; and the whole composition builds up around the chapel block (chapel on 2nd floor). Dormers of various designs, steep roofs at different levels, diverse methods of fenestration, bold use of projecting gables and positioning of slab-like chimneys, emphatic buttresses and strings give much plastic richness without distracting from strong massing of volumes. Despite one deliberate piece of 'realism' (an entrance gate-house wedged between the chapel and school block with its acute roof at right angles to that of the whole block), the design is more sensitive than Cuddesdon and less hard and bleak than the later work at Uppingham.

The situation with regards to the very considerable executed building complex at St. Margaret's Convent in East Grinstead, Sussex, is far less clear. Philip Webb states in

his biographical article on Street:⁴⁵ 'In 1853 Street's practice was augmented by the inception of two important works—the theological college at Cuddesdon, and the buildings of the East Grinstead Sisterhood, an institution with the foundation of which Street showed so much practical sympathy as to refuse remuneration.' This would seem to mean no more than that Street was already in touch with the Rev. J. M. Neale, after Benjamin Webb the most influential member of the Ecclesiological Society, concerning this project before Philip Webb entered Street's employ in mid-May 1854, for the foundation of the Sisterhood by Neale was in 1854 not 1853. It seems probable, therefore, that a fairly complete scheme existed on paper by 1855 although little if any of it was executed.⁴⁶ The actual site and the quarry for stone were, indeed, acquired only in the summer of 1864 and the cornerstone of the north and west ranges was not laid until 26 July 1865. The construction then initiated may well have followed closely an original design of ten years earlier, however, and that is what stylistic evidence seems to support. It may not be inappropriate, therefore, to include an account of the earlier portions of the Convent at this point.

The range of buildings toward the northwest certainly appears today much as it did in a perspective, published in 1868,⁴⁷ which presumably included all that had been executed up to that time (fig. 3).

45. 'George Edmund Street', in *D.N.B.*

46. If anything were built in these years, or even if the execution of a considerable portion of a complete scheme were seriously envisaged in the mid or late '50s, it seems extremely unlikely, considering the client, the character of the project, and the architect, that it would not have been mentioned in the *Ecclesiologist*.

47. *Building News* xv, [860-861]. The occasion was the proposal to erect a larger chapel behind the original one and an additional extension to enclose the original quadrangle on the southeast.

The long, low range at the front is broken by taller gabled projections and the whole is treated in an essentially domestic way. Except for the deep-moulded entrance, the windows are mostly plain oblong lights separated by mullions under pointed bearing arches; tracery of the simplest plate character appears only in the stepped triplet of larger windows in the left-hand gable. To the right of the main façade, however, which corresponds to the open quadrangle behind, the tall gable of the original chapel (later the refectory) rises above a low passage and this has a vast window filled with elaborate geometrical Decorated bar-tracery. Still higher, behind that, rises the gable of a projected new chapel with a similar 'west' window.⁴⁸

There is little or no Butterfieldian 'crankiness' here and the whole effect is such as Pugin should have approved—quiet, easy, and yet with a solidity of simple craftsmanship in stone that Pugin himself had rarely been able to achieve. To later eyes it is the more elaborate features that appear dated; but the fairly arbitrary piquancy of the asymmetrical placing of the entrance arch, with the wall-plane extended as a buttress to the left, has the special kind of High Victorian interest that the big traceried windows lack. Otherwise the picturesqueness of the long composition, if not entirely derived from the 'sternest utility'—it is amusing to see how humble coal-sheds and larders are allowed to break forward prominently from the corridor that runs along most of the front—is not forced or underlined by arbitrary accents.

The design for the comparable mother house of the Wantage Sisterhood, then known as St. Mary's Home for Penitents, is more surely datable. The institution was founded by Butler at the same time as the East Grinstead order, 1854, and Street's project for the buildings was most favorably described by the *Ecclesiologist* in 1855:

We have been greatly pleased with Mr. Street's design for this foundation. The chief buildings for the sisters and penitents form a block, from which, projecting at right angles, the dining and working rooms of the penitents make the north side of a half quadrangle. This part of the building projects eastward as a chapel [built 1858–1860 (fig. 22); the larger and later chapel is by J. L. Pearson]; from the southwest of which returns the chaplain's lodging, forming the eastern side of the quadrangle. The offices and industrial departments form another court behind, at the northwest side. . . .⁴⁹

The existing structure is considerably less impressive than the East Grinstead Convent and, except for the court façades, rather more confused by later changes and additions. Betjeman and Piper rightly remark, however, how effectively the 'chimneystacks are made into decorative features of the façade, continued, Tudor fashion, down

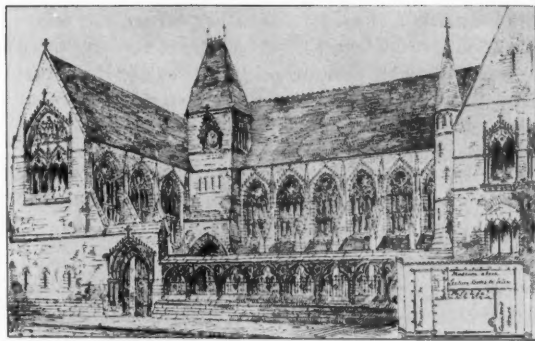


Fig. 4. Project for University Museum, Oxford (from *An Urgent Plea* . . ., Oxford, 1853).

the whole length of the building.⁵⁰ Moreover the window types are more varied than at Cuddesdon: some have colonnettes under square lintels and others under cusped arches; a few even have shouldered arches like several of the doorways inside. The absence of these 'un-English' forms at East Grinstead suggests for that design a date at least as early.

Of much more monumental character than these two nunneries is the one important project of Street's early Oxford years for a strictly secular building, that prepared in 1853 for a University Museum at Oxford and illustrated in *An Urgent Plea*. As befitted its presumably urban site this was in the main extremely regular, indeed almost symmetrical (fig. 4). Although an oblong tower was to rise over the entrance to the left and a circular turret on the right, the high-gabled front wing of the U-shaped building was balanced by another containing the curator's living quarters. Their fronts were to be linked towards the street across the front of a shallow court by an arched screen with a gateway in line with the main entrance to the rear.

There is little of the directness and simplicity of Street's executed secular work of the period in the façade treatment here (figs. 1–4, 23, 24, 26, 27). The ranges of big traceried windows with buttresses between and crocketed gabling above are, indeed, more elaborately rich than those of any of his early churches. Rather conventional Continental influence dominates, with none of the touches of piquant 'realism' that most relate Street's work to Butterfield's. But doubtless this pamphlet had some effect, for the University Museum was soon being built from the Gothic design of Deane & Woodward that won the competition held in 1855,⁵¹ even if not from Street's.

48. The chapel was never executed according to this design. The present chapel in this location was erected from a later design by Street the contract drawings for which (at the R.I.B.A.) are dated 15 July 1879.

49. *Ecl.* xvi, 190.

50. In *Murray's Berkshire Architectural Guide* (London, [1949]), 149. The date 1866 given for Street's chapel is incorrect.

51. Brief discussion in *19th & 20th*, p. 176. The completion of the Museum in 1859 coincided with—indeed, played a large part in—Ruskin's early disillusionment with the High Victorian Gothic.

Quite as different from this rather extravagant essay, whose chief virtue lay in the regularity of mass resulting from simple straightforward planning, as from the stone-built institutions in Oxfordshire, in Sussex, and in Berkshire—all three almost as Puginian as Carpenter's big contemporary schools at Lancing and Hurstpierpoint—is the Adderley Park Institute, begun in 1854 for Lord Norton in Adderley Road in the slummy Saltley district of Birmingham. Although this serves today as a branch of the Public Libraries of Birmingham, it is not well maintained and grime has obscured the bold banding of the brick walls even more sadly than on the exterior (then just completed) of Butterfield's All Saints', Margaret Street. Street had used touches of structural polychrome five years before on the little school at Inkpen; and the roof and the reredos of St. Michael's, Oxford, not to speak of the roof of Cuddesdon College, gave evidence of his increasing interest in the exploitation of colored materials as recommended in his 'True Principles' paper of 1852. But this seems to have been the first example of his use of characteristic Butterfieldian banding in red and black brick, perhaps because it was the first time that he had built in brick—and, for that matter, in an urban setting. Street's own study of German architecture had familiarized him early with authentic mediaeval banding in two colors of brick; but the bold scale of the banding here and the particular materials—red brick with black insertions—must derive from Butterfield's new London church, however much supported by what Street had seen in Italy in 1853 and earlier in Germany. Otherwise the Adderley Park Institute (or Reading Room and Library as it is more usually called) is of interest only for its relative regularity, contrasting thus with the more broken silhouettes of his contemporary rural work.

In the hierarchy of prestige recognized in the period, as also perhaps for posterity, Street's secular work of the early '50s is entirely outranked by his first really considerable ecclesiastical commission, that for All Saints' in the Boyn Hill district of Maidenhead in Berkshire, which also included a good-sized vicarage and extensive schools. The vicarage lies at right angles to the church on the south and the other two sides of a quadrangle, entered through a gateway set across the northeast corner, are formed by the school buildings. The site was then completely rural and is still very open; moreover, the curving street allows fairly distant head-on views of the tower from both the west and the north. Thanks to the prominence of this tall, once nearly free-standing, tower and the orderly arrangement of the quadrangle the group attains to an urbane sort of monumentality that is in sharp contrast to the low and rambling organization of related structures that was usual in the '40s.⁵²

52. The layout of the group, reflecting that planned five years earlier for Treverbyn can best be appreciated in the bird's-eye view

The westward extension of the nave, carried out in 1907, has not seriously modified Street's original scheme. Although it has reduced the isolation of the tower, it has also increased the sense of enclosure in the quadrangle. The materials, of course, are inferior. But the detail is all quite like Street's except for the omission of the black brick edging of the stone bands and of black and red brick voussoirs around the arch of the west window. This last feature was fortunately retained, however, over the aisle windows of the new portion.

All Saints' was begun in 1854 and consecrated in 1857; but the tower, with its red-and-white-banded belfry and its tall broach spire of white stone with a few linear insertions of brick (fig. 6), dates from about 1860 when the design was shown at the Royal Academy. This and most of the stained glass were not completed until 1865. The buildings were from the first generally admired, indeed the group at once established Street as a real rival of Butterfield. Even though they lack the special sort of 'reality' of Butterfield's work, they are still today more likely to please than are that master's own best-known productions, if only because the polychromy—outside as well as in—has survived almost intact in the clear local air.

The church is conventionally English in disposition, quite in line with the planning standardized by the Ecclesiological Society in the '40s, except for the rather campanilelike location of the tower, itself of a very English sort with its tall broached spire. Although traceried, the coupled windows in the low clerestory are flat-headed externally like those of some of Butterfield's smaller churches; the tracery of the east, west, and aisle windows is quite conventionally English Decorated, as at East Grinstead, without the Continental elaboration of those in the Museum project. The principal material both inside and out is brick, presumably local, of a bright orange red. The external banding is very discreet, courses of light stone at sill and impost level of the aisle windows and at mid-height of the clerestory, the stone bands being lined above or below with single courses of black brick (fig. 5). Contrary to Street's earlier contention in his 'True Principles' paper, however, the arches are richly banded radially in stone and in black and red bricks. The intrados is notched, a detail whose 'realism' is hard to support but which soon became as generally popular as permanent polychrome in High Victorian work.⁵³

Inside the church the treatment is considerably richer (fig. 7). The four arches of the nave arcade on each side are multibanded in the outer two orders, which are both notched, and also have a moulded stone inner order to

published in the *Builder* (1860), 769, even though this gives little idea of the ultimate form of the belfry and steeple or of the boldness of the polychromy throughout.

53. It was picked up at once by Deane & Woodward for use on the Oxford Union of 1856–1857, for example.

which the lozenge-shaped abacuses above the crocketed capitals are carefully adjusted. The nave columns are of stone, but coupled marble colonnettes of a ridiculously petty scale carry the banded arches of the clerestory lights, and corbelled colonnettes correspond to the moulded inner order of the chancel arch. Carved reliefs set in banded circular frames occupy the spandrels of the nave arcade, while a large mural fills the top of the east wall. The relatively plain and very structural open wooden roof defines effectively the space of the nave without distracting attention from the walls below as in so many churches of the '40s.

The wall treatment in the chancel is much bolder than in the nave, with bands of yellow and of green glazed terracotta and also of polished alabaster as well as of stone and of brick. But there is none of the dazzling marquetry in miscellaneous materials that Butterfield exploited at All Saints', Margaret Street, so that the general effect is more like the relatively quiet polychrome brick interior of the latter's almost precisely contemporary church at Balldersby Saint James in Yorkshire.

The vicarage and the school buildings are much more violently polychromatic than the church, especially the vicarage (fig. 8), doubtless on the analogy of the clergy house and choir school at All Saints', Margaret Street. The black bricks on the church are really burned black, but those on the subsidiary structures are ordinary bricks dipped in tar, which has fortunately worn off only here and there. For all its undoubted effectiveness, hardly rivalled by that of any other surviving example of early structural polychrome, the excessive profusion of the wall-patterning here and the un-co-ordinated arrangement of the varied window shapes with their wooden mullions—were they always painted such a staring white?—makes this a most exceptional example of Streetian parsonage design. He was never quite so aggressively Butterfieldian again.

The gradual enlargement and rebuilding of St. Peter's,⁵⁴ Bournemouth, which Street first undertook in 1854–1855, produced in the end a rather extensive if somewhat incoherent pile. After he had built the north aisle in 1855–1856 the work dragged on and on in several discontinuous campaigns, so that the spire was not completed until 1879, two years before his death. The continuously arcaded clerestory, carried out along with a new nave roof in 1857–1859, with occasional irregularly spaced dark vousoirs, plate tracery, and marble colonnettes, is a sort of forestudy for that in St. Philip and St. James, Oxford, perhaps his finest church.⁵⁵

54. The church was originally built by J. Tullock in 1841–1843; the south aisle was added by Edmund Pearce in 1851.

55. At Bournemouth the sumptuous and very prolonged choir, sanctuary, and east transepts are precisely contemporary with the Oxford church since they date from 1860–1864. The tower, minus the spire, was built in 1869–1873 and the west transept in 1874.

Far more important is another project of 1855, the largest Street ever made for a new church, although his later work on the Bristol and Dublin cathedrals approached this in size.

Ten years earlier George Gilbert Scott won the competition for the Nikolaikirche in Hamburg. This had initiated the high foreign reputation of the English Gothic Revivalists even more than the writings of Pugin. But the results of the international competition for Notre Dame de la Treille et St. Pierre, a church of cathedral scale to be built at Lille, were rather more remarkable than Scott's success at Hamburg.⁵⁶ From the first the Ecclesiological Society took a great interest.⁵⁷

Early in March 1856 forty-one sets of designs were received at Lille and put on exhibition in the Halle au Blé. Of the lot, fifteen were French and the same number British—including one Scot (I mean with one 't'; G. G. Scott did not compete). Eight Germans entered, and one each from Holland, Belgium, and Luxemburg. In the estimation of most contemporaries the decision was well within the competence of the jury, consisting as it did largely of *archéologues*, since the terms of the competition required that the design be in early thirteenth-century Gothic.⁵⁸ All the more unexpected, therefore, despite Scott's second success in Hamburg in the competition of 1855 for the Rathaus there, was the resounding English victory.⁵⁹

56. The competition was announced in late 1854 for designs for a vast church of 100 to 110 meters in length of early thirteenth-century style to be built of brick with trim of Voielet or Hordain stone. The ultimate cost was to be 3,000,000 frs. and the first prize an advance of 10,000 frs. on the commission, or 6,000 frs. if the design were not executed. There was also to be a second prize of 4,000 frs. and later several additional prizes were added. The jury members were de Cotencin, *directeur général des cultes* in the Imperial government, representing the secular authorities; the mediaeval archaeologists Arcisse de Caumont, A.-N. Didron, editor of the *Annales archéologiques*, and Arthur Martin, editor of the *Mélanges archéologiques*, representing the world of specialized learning; and a Belgian and a German, Le Maistre d'Anstaing, who had restored Tournai Cathedral, and Reichensperger of Cologne. (*Revue générale de l'architecture* xii, 331–334; *Annales archéologiques* xiv, 384–389, xv, 204–212; *Encyclopédie d'architecture* v, cols. 8–11; *Moniteur des architectes*, 1855–1856, cols. 249–252.)

57. English architects wishing to enter the competition were requested to approach the Society for information, which thus acted (at least informally) as agent for Count A. de Caulaincourt, who was the secretary of the Commission appointed to run the competition. *Ecl.* xvi, 1–5, 157, 217, 306, 373.

58. Aymon Verdier, in the *Encyclopédie d'architecture*, protested vehemently, however, the absence of professional architects from the jury and at the last minute Questel and Danjoy were brought in as consultants, concurring in the decision of the original members.

59. Preliminary reports on the designs, which were still referred to by key designations and not by the as yet unrevealed authors' names, appeared in the *Revue générale de l'architecture* xiv, 33–46, and in the *Annales archéologiques* xvi, 111–129. The *Ecclesiologist* also commented on the designs before the awards were made known, xvii, 80–105, preferring Street's design (which the reviewer seems to have spotted thanks to the use of 'Quam dilecta . . .', the Society's own motto, as the designation) but also approving the one labelled

The first prize went to Henry Clutton and his young associate William Burges, a distinguished High Victorian Gothic architect whose public career began with this project; the second prize of 4000 frs. went to Street; and only the third to a French architect, J.-B.-A. Lassus, the restorer of the Sainte Chapelle and Notre Dame. Those who are at all familiar with Lassus's earlier churches will only be surprised that he received any premium at all;⁶⁰ but at this point (1854–1859) he was actively engaged in building the big Paris church of Notre Dame de Belleville in a plausible, if cold and depressing, thirteenth-century style. His position in French ecclesiology, moreover, was not yet outclassed by the superior and more systematic knowledge of the anti-clerical Viollet-le-Duc, whose higher reputation both in France and abroad had only just begun to be established with the publication of the first volume of his *Dictionnaire* in 1854.

English architects received no gold medals, but of the silver medals they took three. One went to Isaac Holden & Son of Manchester, very provincial church architects quite outside the ecclesiastical circle. Another went to George Evans and R. P. Pullan, Burges's brother-in-law and biographer (but best known today for his book of 1864 on *Byzantine Architecture* written in collaboration with the French archaeologist Charles Texier). And—of all people—Cuthbert Brodrick, the most brilliant Classical designer of the younger generation in England as his Leeds Town Hall (for which he had just won the competition in 1855) so well illustrates, received a third. Three more Englishmen, of whom only the young partner of the Catholic architects Weightman & Hadfield, George Goldie, has any surviving reputation at all, received honorable mentions. Out of nineteen awards English architects therefore took eight, a complete turning of the tables since the international competition held in 1850 for the building to house the Great Exhibition of 1851, in which the French walked off with all but one of the top premiums.

But the results were almost as unsatisfactory for the English winners as for the French winners in 1850—perhaps the hoodoo which dogged Burges in several later competitions was already at work! In any case, because Clutton and Burges were Protestants rather than because

they were foreigners,⁶¹ Père Martin, one of the jury, was appointed to supervise the erection of the church, the actual architectural commission being finally given in 1858 to Leroy,⁶² a local professional of the proper faith. Needless to say the accepted design was very much modified in execution. Construction dragged on into the present century, by which time the church had finally received cathedral status after Lille became the seat of a diocese.

To contemporary English taste Street's design, which the *Builder* published,⁶³ was preferable to that of Clutton and Burges. The jury had seen in theirs the 'singular union of precedent and originality' which we know to be especially characteristic of Burges's later work; in Street's they saw what can best be translated as 'manly energy'—words of the warmest praise in High Victorian England, if not necessarily so in Second Empire France; while in Lassus's they found the respectable qualities of judgment and, of course in a French entry, 'goût'. To continue with the jury's comments on Street's design:

To a profound knowledge of Pointed art this author adds a rare power of conception, which is shown as well in the details as in the general design. We recognize here, at first sight, the work of a great master. In particular we must congratulate the author . . . on having faced more boldly than any other competitor the difficulties of using brick⁶⁴ in a monumental edifice. . . . Power rather than grace is the general characteristic of this magnificent creation of art . . . little was wanting to its mounting to the first place.

Leroy, the executant architect, eventually used some elements of Street's design, notably his cloisters, but caricatured them with clumsy detail and even added rusticated quoins!

Street's west front is very vertically proportioned with crocketed gables over the deep statue-lined portals (fig. 9). The rose and the flanking windows have 'Early French' plate tracery. The towers start out to be very tall, but are soon terminated with an octagonal belfry stage into which crocketed corner pinnacles sink, with rather low-pitched spires overloaded by eight gables above. As at Maidenhead, the interior was to be of the same brick as the exterior with occasional stone bands and considerable stone trim—no black brick insertions, however, were proposed.

'Foederis arca' (which was that of Henry Clutton and William Burges), respectively the second and first prize designs, as was soon made known. The awards were announced in *Revue générale de l'architecture* xiv, 72–80; *Annales archéologiques* xvi, 205–230; *Encyclopédie d'architecture* vi, cols. 93–98 [with Verdier's protest], 146–150; *Moniteur des architectes* (1855–1856), cols. 389, 399–404; *Bulletin monumental* (1856), 72, 156–160, 598; and also in *Ecl.* xvii, 161–169. The controversy over the awards led to considerable pamphleteering: Claudius Levesque, *Concours pour l'érection de la cathédrale de Lille* (Paris, 1856); Anon., *Oeuvre de Notre Dame de la Treille* (Lille, 1856); and *Concours d'architecture pour la construction de la cathédrale de Lille. Notice relative au projet portant pour épigraphe: Zelus domus tuae comedit me* (Paris, 1856).

60. See 19th & 20th, 108–109.

61. It is rather ironical that most of Clutton's later ecclesiastical work in England, notably his best church, St. Peter's, Leamington, of 1861, was done for Catholics. The refusal to employ the English first-prize winners was sourly commented on—'English Art has had its Agincourt'—in *Ecl.* xvii, 288–294.

62. *Annales archéologiques* xviii, 363. Leroy had reputedly built some twenty-five churches in the vicinity of Lille, but is otherwise quite unknown.

63. *Builder* (1858), 91.

64. The use of brick was, of course, required by the terms of the competition quite as definitely as the French early thirteenth-century style. This was quite as revolutionary for a church in France in the '50s as in England, if not more so, but followed local tradition. The translations of the jury's comments are from *Ecl.* xvii, 161–169.



Fig. 5. Detail of aisle wall, All Saints', Boyn Hill, Maidenhead (photo: A. C. O'Malley-Williams).

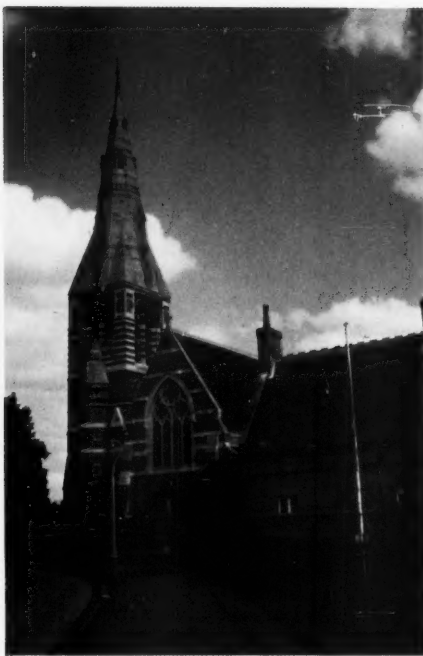


Fig. 6. Tower and steeple, All Saints', Boyn Hill, Maidenhead (photo: A. C. O'Malley-Williams).

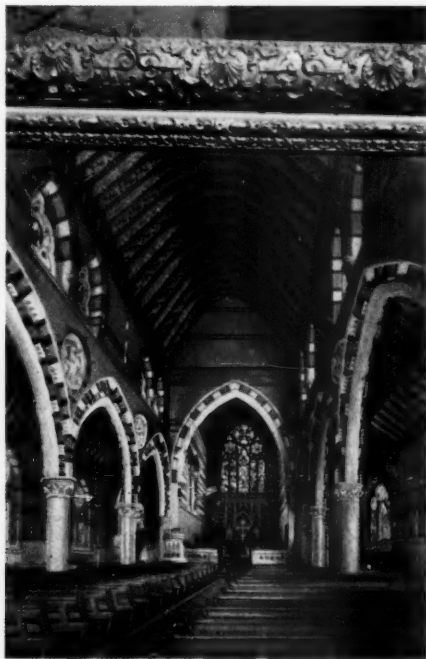


Fig. 7. Interior from a contemporary painting, All Saints', Boyn Hill, Maidenhead (photo: A. C. O'Malley-Williams).



Fig. 8. All Saints' Vicarage, Boyn Hill, Maidenhead (photo: A. C. O'Malley-Williams).

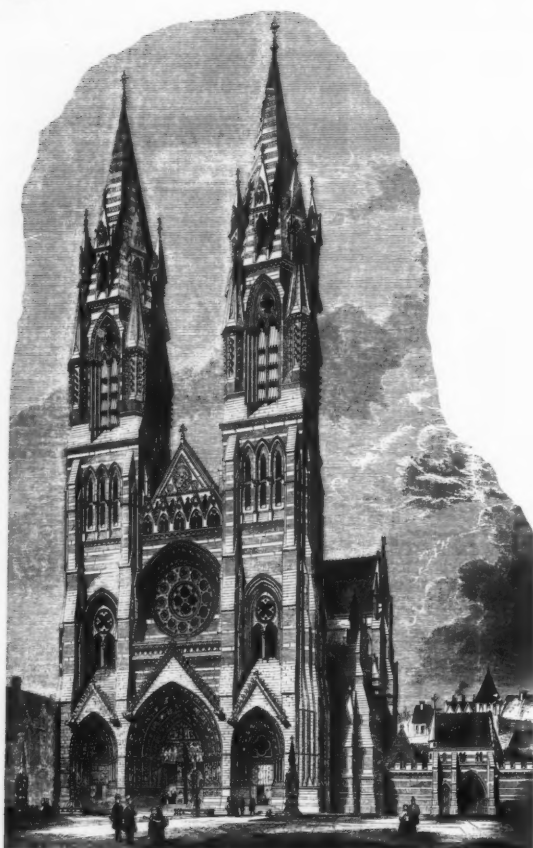


Fig. 9. Second-prize project for Notre Dame de la Treille et St. Pierre, Lille (from *Builder*, 6 February 1858).

The *Builder* reported additional French comment (by Henri Cauvain) on the results of the competition.⁶⁵ The English winning designs, he wrote, showed high qualities of 'science' (archaeological knowledge), style, and taste. As Protestant prejudices had grown weaker, the English school of art had shown a development which was 'rapid, resolute, and irresistible'. The 'enthusiasm of imagination, fertility of thought, and vivifying energy' of the English Neo-Gothic architects led to this triumph of the English school and represented a challenge to French architects. That was certainly a cordial tribute!

Clutton and Burges were both devoted students of French mediaeval architecture and had already made several trips to France.⁶⁶ Street, however, had (so far as we

know) only been in France once before 1855 on his first trip in 1850. Yet he was already a more thorough mediaeval archaeologist, in the French sense, than most of his compatriots, not excluding Ruskin and the chief contemporary architectural historians E. A. Freeman and James Fergusson. Doubtless this explains the rapidity with which he attained to the mastery that was recognized by a not unbiassed French jury—mastery of a particular phase of mediaeval style to which Lassus had already devoted a decade or more of continuous study with much less success. Serious cramming, plus 'manly energy', must explain Street's achievement; and something like manly energy—what was soon to be slangily called 'go'—(if with considerably less effective cramming) must explain how so many other English architects besides Clutton and Burges and Street were competent enough to deserve their awards.

The Lille competition naturally helped to focus English attention on French thirteenth-century Gothic at the same time that it established the very considerable ability of British architects at 'reviving' it—in the eyes of contemporaries at least. But it should also be noted that the international exposition of 1855 in Paris had brought many English visitors to France and into the presence of Notre Dame, the Sainte Chapelle, and the other churches of Paris, even if they saw no other great Gothic monuments as many must certainly have taken the occasion to do. For the High Victorian Gothic cocktail, hitherto made rather sweet with Italian vermouth, another recipe now suggested itself made with French vermouth. The best brand of French influence was naturally the imported, and this was just beginning to be available in England from the volumes of Viollet-le-Duc's *Dictionnaire*.⁶⁷

Another competition which led English architects to design a church for a foreign country, that for a Crimean War Memorial Church to be built in Istanbul, was announced in the spring of 1856,⁶⁸ just as the results of the Lille competition were becoming known. The Istanbul competition was less rigid than that for Lille in stylistic restriction, but the program stated that the style 'must be a modification to suit the climate, of the recognized ecclesiastical architecture of Western Europe, known as "Gothic" or "Pointed"'. The results of the competition, announced early in 1857,⁶⁹ brought almost exactly the same protag-

laboring with one of the leading French ecclesiologists, Didron, who had of course been a member of the Lille jury, on an *Iconographie des chapiteaux du Palais Ducal—Venise* (Paris, 1857), a study of distinctly Ruskinian flavor.

67. Of this the first volume came out in 1854, as has been noted, and the tenth in 1868, after which the taste for foreign flavors in Gothic rapidly declined.

68. *Builder* (1856), 333. The due date was 1 January 1857, and there were at first to be but two prizes of £100 and £70, the winner to receive the commission from which the prize would be deducted.

69. *Builder* (1857), 81. Discussion followed in 1857, 115–116, 157–158, with specific accounts of the first and second prize designs in 1857, 150–151 and 162–163 respectively.

65. *Builder* (1856), 326–328.

66. Clutton's principal publication, however, was not especially relevant: *Remarks, with illustrations, of the domestic architecture of France from the accession of Charles VI to the demise of Louis XII* (London, 1853). Burges had yet to publish at all, but was very soon col-

onists to the fore as had the Lille competition, for Burges won the first prize and Street the second.

Curiously enough, the character of their designs seemed to reverse what must then have been considered their personal critical positions, since Street's was rather French and Burges's very Italian. Ruskin's umbra had only shortly before (in 1855) become a more important, or at least a more immediately effective, propagandist for Italian Gothic than Ruskin, as has already been noted; while Burges was very soon to be a leader among those who deplored the inappropriateness of using Italian Gothic features in England and a far more convinced champion of 'Early French' detail than Street ever became. But the phrase, 'modification to suit the climate', in the program and an incorrectly presumed similarity between climatic conditions on the banks of the Bosphorus and in the valley of the Po seemed to Burges—as evidently also to the jury—to justify the closest copy of an Italian Gothic model that had yet been proposed for Anglican use.⁷⁰

The model was, at least nominally, Sant' Andrea at Vercelli (1219-1237),⁷¹ a large Gothic edifice designed according to tradition by an English (actually more probably, a French) architect brought back to Italy by Guala Cardinal Bicheri, who had been a papal legate in England in the early thirteenth century. Street, quite naturally, had found this church, with its striking polychromy of brick and plaster used with both green and cream-colored stones, of 'unusual beauty and interest', but he had not illustrated it in his 1855 book.

The jury who awarded the prizes included Professor R. Willis—previously a firm opponent of banded walls—Beresford Hope, Sir Charles Anderson, the Bishop of Ripon, and the Dean of Ely. The church was to cost £20,000 and the first stone was laid in 1858 on a very steep piece of ground provided by the Sultan. But difficulties arose and Burges's plans were soon abandoned as unsuited to the site. In 1864 Street was commissioned to build a new and smaller version of his second-prize design: that must have been to Burges a blow as harsh as the loss of the Lille commission.

Street considered that the church ought to be more a sort of embassy chapel for the English inhabitants of Constantinople than a great edifice of cathedral plan, such as Burges proposed. He also felt the design should proclaim its English authorship and not be readily confused with that of churches built for Continental Roman Catholics. He meant to use local rubble for walling, though he also proposed the introduction of alternate voussoirs, and even

broadly spaced bands, of colored marbles. The detail was to be kept simple so that it might be executed by local workmen.

If Street's design had an unmistakably English character, that character was certainly English Victorian rather than English thirteenth century. The stone vaulting, moreover, so little used thus far in Victorian times, the polygonal apse, and the tremendous buttresses, not to speak of the plate tracery, had a generically Continental, if not necessarily an 'Early French', air. The centralized and symmetrical emphasis on external plastic mass, with the curious low 'cloister' surrounding the nave and passing through the base of the buttresses, contrasted as sharply with Butterfield's characteristically flat ornamented surface-planes as with the rambling picturesqueness of Early Victorian Gothic. But Street's conscious rivalry with Butterfield was not yet over, as several of his church designs of 1858 and 1859 make clear (figs. 11-19). However, his next important project was secular, not ecclesiastical.

It is well known that the first major public building in England after the Houses of Parliament—themselves still far from finished in the mid-'50s—to be of Gothic design was the University Museum at Oxford, under construction in just these years. It was 1859 (the year the Museum was completed) before a Gothic design by Alfred Waterhouse for the Assize Courts in Manchester won in a competition for a governmental commission. More significant of the best High Victorian taste than this overrated edifice, and providing with the Oxford Museum and Scott's winning project of 1855 for the Hamburg Rathaus most of the elements that Waterhouse combined at Manchester, were several of the Gothic projects submitted in the Government Offices competition of 1856-1857 that ran all but parallel with the one for the Crimean Memorial Church.

The complicated story of this important but largely abortive competition need not be told here in full.⁷² There were to be separate awards for (1), a complete block plan for all the government offices in Whitehall; (2), the War Office separately; and (3), the Foreign Office separately—although most architects linked these two ministries together in their projects and designed them harmoniously if not identically. No Gothic designs won first prizes, although Scott's Gothic third-prize design for the Foreign Office was actually commissioned at one point. After a series of maneuvers of comic deviousness on the part of both government authorities and architect, however, it was an edifice of more or less Italian Renaissance design,

70. Illustrated and described in *Building News* III, 332-333, 356-357, as well as in *Builder* (1857), 150-151.

71. Curiously enough, Bodley, the winner of a third prize, also based his design on Sant' Andrea of Vercelli. Bodley was, of course, later the leader in the return to English fourteenth-century models in the mid-'60s and '70s.

72. For the terms of the competition and related matters, see *Builder* (1856), 468, 521-522, 577-578. The jury included one architect, William Burn, one engineer, I. K. Brunel, one painter, David Roberts, three peers, the Duke of Buccleuch, Earl Stanhope, and Lord Eversley, and Stirling, a member of Parliament.

acceptable to the Palladian-minded Palmerston, that Scott finally built. Ironically, this was the only tangible result of the whole affair. But this competition, or at least its premiated non-Gothic designs, marked an important step in the rise of a new sort of French influence, that of the architecture of Second Empire Paris, which was destined through the rest of the High Victorian period—and considerably longer—to be a serious rival to Neo-Gothic in England as elsewhere in the Western World.⁷³

There are two other Gothic designs that should be touched on here before describing Street's.⁷⁴ It was unthinkable that the pious Butterfield should enter so secular an arena, so that Street alone represented the High Anglican wing of the Gothic forces, with which effective leadership had resided ever since the early '40s, and even more definitely since the death of Pugin in 1852. Scott represented a broader point of view, yet on the whole a less creative and original one. Deane & Woodward represented Ruskin, and hence a quite secular aestheticism. But Street and his assistant Webb were not as remote from them as from the success-at-all-costs maneuvering of Scott. With Street's project and that of Deane & Woodward begins the strong impingement of the ideals of the most advanced Gothicists upon the non-ecclesiastical world, an impingement for which the work of Deane & Woodward going forward in these years at Oxford and in London was doubtless even more responsible. Probably it was the relative remoteness of the Dublin headquarters of Deane & Woodward, as also Benjamin Woodward's early death in 1861, that explains why the line descending from Street proved in the next decade to be the main stream of advance.

However, it is Scott's third-prize design for the Foreign Office, even though unexecuted, that is much the best known because around it centered for a good many years one of the last and most violent of the Victorian 'battles of the styles'.⁷⁵ Together with his unpremiated—and never commissioned—design for the War Office, with which it was to be joined by arched gateways, it was to surround a large quadrangle. Along the park side ran a series of large offices with a stair tower nearly in the center. This façade was not only asymmetrical but irregular throughout, since the innumerable arched windows were variously grouped

according to the disposition of the rooms they lighted. The main entrance, in the center of the inner front of the main block, was set in a flat projection with a gable; but the chief elaboration of the composition was at the external ends of the wings. There the corners were carried up as tall square pavilions, capped by mansards of practically Second Empire height and pitch, against which were set polygonal stair turrets. The Italian Gothic features in the detailing were subordinated to the more Northern boldness of the massing, and the intended material was to be Portland, Anston, or Mansfield Woodhouse stone, not brick, with a modest amount of structural coloration provided by insertions of Red Mansfield.

Compared to the Gothic designs which won the fourth and the seventh prizes for the Foreign Office, or even to Prichard & Seddon's fourth-prize design for the War Office, the inferiority of Scott's project to twentieth-century eyes—and to the real connoisseurs of High Victorian Gothic at the time, for that matter—is very marked. The seventh-prize project was Street's and the fourth Deane & Woodward's; but the *Illustrated London News*,⁷⁶ in publishing the latter, did not hesitate to repeat a rumor crediting Ruskin with the design. The year 1856, when the design was being prepared, represented probably the closest and most optimistic period of Ruskin's association with Woodward on the Oxford Museum. Moreover, the other works of the Dublin firm proceeding in England at this time, the Union Hall in Oxford and the Crown Life Office in London,⁷⁷ were marked by direct and unmistakable Ruskinian influence. That Ruskin should have been some sort of a collaborator on this fourth-prize design helps to explain his sardonic lack of interest in the 'battle of the styles' between Scott and Palmerston when Scott kept trying to line up the whole Gothic party in support of his third-prize design. That the project is in any real sense Ruskin's it is difficult to believe—the planning alone would certainly have been beyond his capacities and his interests. Yet one can readily accept that as regards the structural organization of the exteriors and the rich ornamentation Woodward followed the critic's guidance very closely. This may therefore be taken to represent, rather more definitely than the little insurance office façade in New Bridge Street, Blackfriars, or the Oxford buildings of Deane & Woodward, the realization (on paper) of Ruskin's ideas for monumental nineteenth-century architecture.

Unfortunately no plan was published. But from the perspective one can see that there was here no such gratuitous articulation of ranges of buildings round a quadrangle chiefly for picturesque effect as at the Oxford Museum or

73. For the beginning of this sort of French influence see *E.V.A.* II, 207–214; for the Second Empire designs in the competition and the ensuing Second Empire phase of High Victorian architecture see *19th & 20th*, 158–164.

74. The design of Prichard & Seddon, which obtained a fourth prize in the War Office section of the competition, attracted considerable contemporary attention also. See *Builder* (1857), 478–479, for illustration.

75. It was naturally also the one most completely illustrated in contemporary publications; see *I.L.N.* XXXI, 275–276, and *Builder* (1857), 494–495. A later version is shown in *Builder* (1859), 535–537.

76. *I.L.N.* XXXI, 348.

77. See H. R. Hitchcock, 'Victorian Monuments of Commerce', *Architectural Review* CV, 61–74.

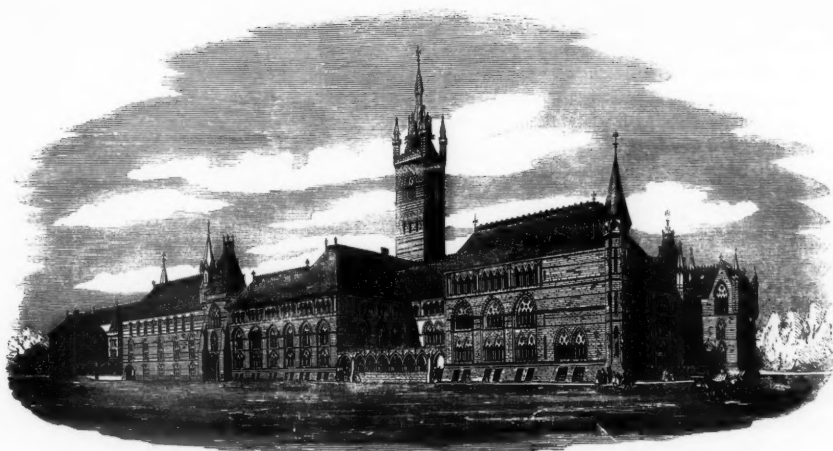


Fig. 10. Project for War Office and Foreign Office, London (from *J.L.N.* xxxi, 412).

in Scott's project. Yet the basic regularity of the superposed ranges of arches—already being used on the insurance office—was here rhythmically broken by the varied grouping of the openings in functional relation, presumably, to the varying sizes and purposes of the rooms behind. Less happily, the staircases at the front corners, to which no pavilion treatment was given, were expressed by stepped openings and thus terminate with an upward lift the long horizontal rows of windows. As one might expect from Ruskin's writings, moreover, the 'wall-veil' was to be sumptuously elaborated all over, not only by the structural ranges of arches and by much colored banding, but also by a profusion of relief sculpture.

On the grounds of cost alone this might well have made the assessors leery of the project. Probably also it was less practically planned than Scott's and, since the anonymity of the drawings must from the first have been an ill-kept secret, the professional prestige of Scott and the powerful claque he could muster in his support would explain why he received a higher award and, ultimately, the actual commission to build the Foreign Office.

Yet to modern eyes Street's seventh-prize design appears far more plausible than either Scott's or Deane & Woodward's. Partly, perhaps, this is because it is more picturesque, and hence more in accord with our expectations of Victorian Gothic; but it is also because that picturesqueness, if hardly deriving only from the 'sternest utility', is nonetheless expressive of the complexity of the functions the complex structures would serve (fig. 10). The blocks to the left accommodating the War Office are, appropriately, linked only loosely in design to the Foreign Office quadrangle, since the terms of the competition made evident that the two projects would be judged as separate entities. As the former can hardly be seen in the

perspective, they may be largely ignored in this discussion. Yet it is the 'realistic' character of the articulation and association of the two groups of blocks, recalling the often happy relationship of contiguous colleges at Oxford or Cambridge, as opposed both to the frenzied confusion of Scott's—and, indeed, most of the other Gothic designs—and the extreme unification of the Deane & Woodward project that best suggests Street's aims. The long roof lines he professed to admire are present, but they are sufficiently broken to define the separate portions of the whole; the fenestration is generally regular, but without the monotony of Deane & Woodward's ranged arcades. The most questionable features are the irrelevant corner accents: the slim turret on the right corner of the front block, the cluster of fragile pinnacles on the tower, and the other spiky incidents that contrast with the essential dignity and straightforwardness of the design.

The three main blocks of the Foreign Office surround an open court which is screened from the street in front by an arcade, as in his earlier project for a museum at Oxford (fig. 4). Their basement storeys have a sharp batter into which plain square windows are rather awkwardly cut. Above this, the two main ranges of windows are linked by tall vertical piers in a fashion that provided important suggestions for Victorian commercial architects now that they were beginning to cope seriously with the problem of designing façades of more than three or four storeys. Between these piers the windows with their plate tracery are more Early English—or 'Early French'—in character than Italian. Within the main rhythm established by the vertical piers (which are linked above the first-story windows by banded arches) there is some variation of treatment in the different blocks, the bays on the right being wider than those on the left. In the top story

small cusped arches on coupled colonnettes, variously grouped by taller shafts set above the lower piers, provide a continuous screen. Behind these, open galleries would give real depth to the shadow below the eaves.

There is much less sculpture than on the Deane & Woodward project, and what there is seems less integral or necessary to the total effect. Moreover, beyond the alternating voussoirs of the arches and the broadly and irregularly spaced dark bands in the upper walls (where they are unbroken to the right), there is little structural coloration on the main blocks of the Foreign Office, although there is more of it on the walls of the War Office blocks.

On the tower, which is so fine and direct up to its corner pinnacles and fussily complicated spire, the amount of polychromy increases towards the top. Up to the belfry stage a few irregularly spaced lines of color provide just that look of geological antiquity that Ruskin most admired in banded walls, the sturdy planes of masonry being otherwise broken only by three slotlike openings. The belfry windows repeat those of the first story of the main blocks, but they are set back in several banded orders, and the corner piers are regularly banded likewise; while in the spandrels under the machicolated cornice there is a diaper of quite Butterfieldian elaboration. The tower rises almost like an independent campanile, dominating the two groups of office blocks and rivalling the Victoria Tower on the nearby Houses of Parliament in height.⁷⁸

Although the actual functionalism of Street's group planning can only be assumed, the general scale of organization and the recurrent though not continuous regularity of the façades, with actual symmetry in the main entrance court, evidently resulted from a serious study of orderly monumental design in terms of function. This sort of design may perhaps be considered at long remove a development from those canons of planning and composition first adumbrated in the asymmetrically towered 'Italian Villas' of the Late Georgian period. But it also represented a nearly complete turn, at once conscious and surprisingly successful, away from the arbitrary picturesque of the Early Victorians towards the picturesque of 'sternest utility'. This project explains better than most of Street's major executed works—particularly his much later Law Courts, even though they offered a comparable problem—what Webb, then, and Shaw, a little later, could learn from him.

No activity of the High Victorians has been so unsympathetic to later taste than what was brazenly called the 'restoration' of Stuart and Georgian churches. Some edi-

78. Actually, of course, the Victoria Tower had by no means reached its full height by this date and the spire of All Saints', Margaret Street, was the tallest point that the Gothic Revival had yet added to the London skyline. It should be noted that Street's tower was in aid of the ventilation system, not merely a picturesque addition to the composition.

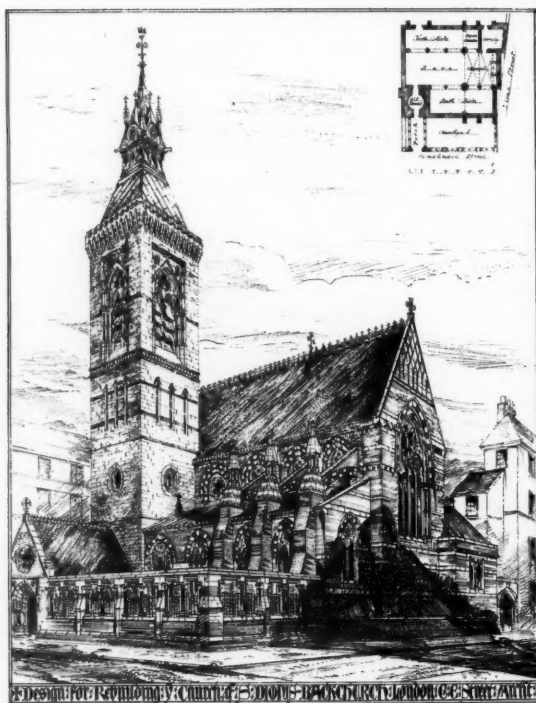


Fig. 11. Project for rebuilding St. Dionis Backchurch, London (from *Ecccl.* xxi, pl. opp. p. 88).

fices even underwent this indignity more than once! There is, therefore, a certain poetic justice that High Victorian churches by the leading masters have been equally roughly treated in the twentieth century, the most notable sufferers being Butterfield's Balliol Chapel at Oxford and his St. Augustine's, Queen's Gate, in London. Street's work has never exacerbated posterity as much and so it has been less roughly handled.

How much he may have pulled down in the way of country work of the seventeenth and eighteenth centuries it is hard to determine. At Tilehurst, Berkshire, in 1855, he kept the red brick tower of 1731 when he rebuilt the church, but capped it with a Gothic spire of stone. What might have brought upon his head the curses reserved for Scott's extraordinary 'Byzantinoid' restoration of Wren's St. Michael's, Cornhill, in the City of London was the proposal to 'restore'—he had the grace to say, frankly, 'rebuild'—another City church, that of St. Dionis Backchurch. In 1859, the same year that Scott was called in at St. Michael's, the authorities requested from Street a project for St. Dionis's which would make use of funds bequeathed in the thirteenth century by Giles de Celsey to keep a light burning perpetually and for the repair of the fabric.⁷⁹

79. See *Civil Engineer and Architects' Journal* xxi, pl. 35; *Builder* (1858), 306; *Ecccl.* xxi, 88.



Fig. 12. Tower, St. James-the-Less, Thorndike St., Westminster (photo: National Buildings Record).

The scheme for St. Dionis's shown at the Royal Academy in 1858 (fig. 11) would have left little more of Wren's original fabric than did its total demolition twenty years later. Considered as a new design—although it actually incorporated much of the old masonry of 1670–1674, particularly in the tower—it is a brilliant composition. A rather deep, but low, gabled porch leads in from the side, with a small yard surrounded by an open screen of stone and ironwork extending to the east. Behind the porch the old tower would still rise almost as plain and square as that proposed for the Foreign Office. However, colored stone bands were to be inserted in the old masonry at the sills and imposts of three slots in each side. Above an ornamental string, broad corner piers, also of Wren's original masonry, would enframe inset panels of plate tracery, with the belfry openings in two orders and heavily louvered. Above this was to come a 'frowning' cornice of the semimilitary sort that Ruskin so much admired. The tall metal roof, however, would break at its top into as unhappy a confusion of gablets and spires as that on the Foreign Office tower—a plain pyramidal roof might have completed the sturdy square form of the tower in a superbly Butterfieldian way, like that on the latter's church at Baldersby Saint James in Yorkshire which had just been completed.

As Street had earlier recommended for town churches, there was to be no break in the continuous horizontal line of nave and chancel roof; and the clerestory windows, with two orders of banded voussoirs enclosing plate tracery, would be as wide if not as tall as those in the aisle. Internally the chancel was to be rib-vaulted, and therefore three flying buttresses above heavily pinnacled pier-buttresses would be needed to abut the three easternmost piers. A tremendous plate-traceried east window was to occupy nearly the whole of the exposed end wall. Only around this was the structural coloration to be elaborated with colored stone bands, incised patterns, and brick diapers combined with almost Butterfieldian profusion.

If Wren's church had to go, one can sincerely regret this could not have replaced it; for St. Dionis's would have offered a clearer and more coherent silhouette than does the church that Street did shortly build in Westminster, and its rich polychromy would have provided a real ornament to the dingy City.

The church of St. James-the-Less, Thorndike Street, Westminster, just off the Vauxhall Bridge Road, is in the rather slummy area that flanks the more respectable Cubitt development in Pimlico with its dreary churches of the '40s by the Cundys. It was built by the Misses Monk in memory of their father, the late Bishop of Gloucester and Bristol, who had died in 1856. It was probably designed at least as early as late 1858 since the builder Myers' contract for £5,600 was accepted in May 1859. It was completed in 1861 for some £9,000 with all its varied and sumptuous decorations, including a mural by G. F. Watts over the chancel arch.⁸⁰ This compares not unfavorably with Dyce's rather *Nazarener* reredos at All Saints', though hardly with the decorations Morris and his Pre-Raphaelite associates were to execute in other churches in the next two decades.

The most striking feature of the group of church and schools—the latter built somewhat later but intended from the first—is the tower (fig. 12). Although of red brick, not stone, it has the sturdy squareness of that projected for St. Dionis's and a simpler, if still rather clumsy, slated spire.⁸¹ Low pointed arches, in several banded orders above plain chamfered jambs, opening in the base of the detached tower lead through a short open 'cloister' to the main north door of the church. The shaft of the tower is more freely and irregularly banded in Box stone and black brick than was that proposed for St. Dionis's. There are also banded arches in two orders over the slotlike openings.

80. *Builder* (1861), 410–411.

81. Reputedly Street based this on a spire in Genoa. It seems more likely, however, that his generic model was French. Such slated spires with four spirelets rising from a square base are frequent in the Isle-de-France, where he must have seen many of them.



Fig. 13. North side, St. James-the-Less, Thorndike St., Westminster (photo: National Buildings Record).



Fig. 14. Apse, St. James-the-Less, Thorndike St., Westminster (photo: National Buildings Record).

Above the modest string that sets off the terminal stage, corner piers with carved crocketed capitals form the outermost of the three orders of the coupled belfry lights. These lights have bold slated louvers, simple cusping in the inner order, and ornate arches banded in color and

also decorated with incised work on the stone voussoirs. These arches are framed in a most curious label almost as if under a low-pitched pediment⁸²—a clumsy caprice much borrowed by other architects determined to display their 'individuality'! The semimilitary brick cornice is simple and strong, appropriate to the sturdy square tower; but over it the slated eaves project in a fashion that confuses the silhouette badly at its most important junction. Although rather heavy and graceless to later eyes, the adjustment of the square shape of the spire at its base to the octagonal upper portion and to the half-sprouted spirelets at the corners does still have much of that rustic 'realism' admired by Street and his contemporaries in French village churches.

The nave, as originally at Maidenhead, has only three bays; and the disproportionate length of the apsidal-ended chancel is the more noticeable because Street ignored his own rule for town churches by breaking the continuity of the external roof line. Large transeptally-placed windows, rising as dormers against the nave roof, and cross gables to the north of the choir at aisle level introduce additional articulation into what is at best a very chunky and irregular mass (fig. 13). Zigzag bands of black brick at the impost level of the small aisle lights and bands of stone, 'cotted' with black brick and incised with ornament, elaborate the wall surface and were once echoed by similar banded patterns in the slating of the roof. Most of the arches are also banded with alternately black and red voussoirs.

At the east end, above the plate tracery which continues the curve of the sanctuary wall between sturdy buttresses, there are repeated clusters of black bricks as well as a band of deeply incised and inlaid work in stone (fig. 14). Similar structural polychrome enlivens the wall surfaces of the schools which form an ell round the northeast corner of the churchyard.

Externally, the finest ornament is provided by the wrought-iron grilles that surround the churchyard, one of the greatest tours de force of the High Victorian period in this material. Without 'copyism', this has all the full-blown richness of the best mediaeval work—which is something that can rarely be said of the carved ornament of the period! It also has a vitality of its own, comparable to that of the most ungainly 'crotchets' of Butterfield. Yet it is suave and gracious, with a true respect for the capacities of the material.

In describing the interior (fig. 15) one may well begin with the materials, basically banded brick, but with nave columns of polished red Aberdeen granite of very stumpy, supposedly 'Continental', proportions and dark Devonshire marble used for the more svelte colonnettes that support the stone ribs of the chancel vaulting of striped

82. This might have been derived from the treatment of the west door of Monreale, based presumably on a Moorish *alfiz*.

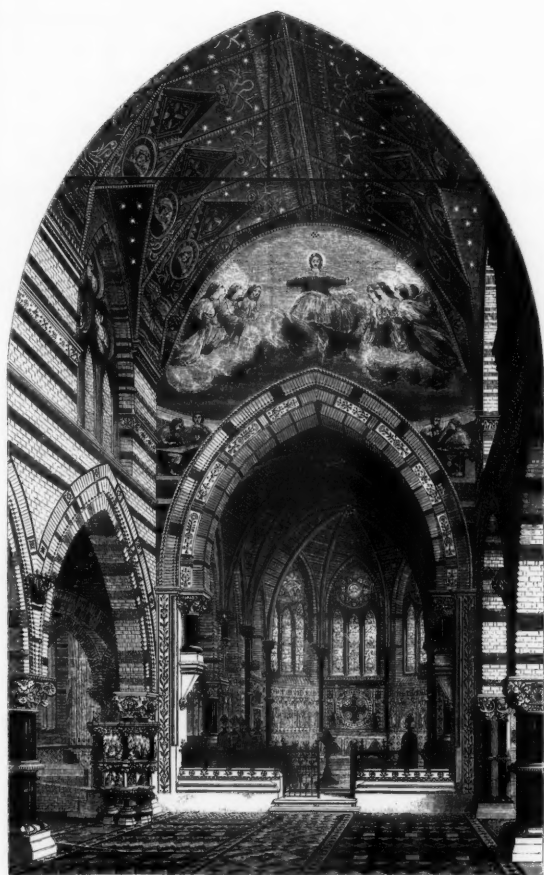


Fig. 15. Interior, St. James-the-Less, Thorndike St., Westminster (from *Builder*, 1862, p. 187).

red, black, and white brick. There is also a good deal of Morpeth stone trim, with boldly scaled color inlay, used for the jambs of the chancel arch, for the inner order there, and for some of the bands on the walls. Along the aisle walls a dado of Maw's glazed tiles, coarser than the rich and intricate tilework of the floors, is of a most unhappy raw brownish tonality.

More successful is the intarsia work that lines the sanctuary walls with a variety of materials almost defying description. The stone reredos, moreover, is inlaid with black composition and also has bands of red and yellow glazed tiles between figures of the Holy Women; while the cross over the altar is of varicolored marbles set with cabochons of Derbyshire fluorspar, an early instance of this jewellike sort of High Victorian decoration that reached its climax on Scott's Albert Memorial in the next decade. Yet this lushness does achieve something of the rather materialistic otherworldliness of the jewelled ornaments inset with mother-of-pearl seen in Early Christian mosaics.

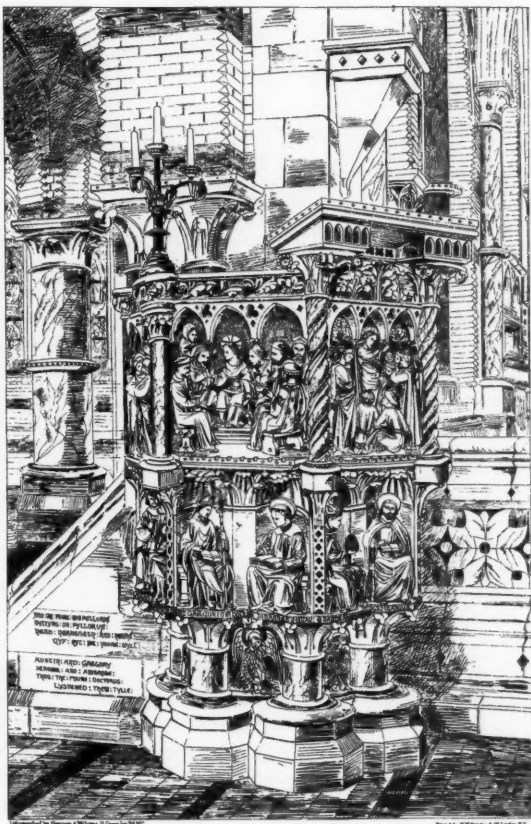


Fig. 16. Pulpit, St. James-the-Less, Thorndike St., Westminster (from *The Architect*, 6 January 1872).

Thus might Heaven itself have been decorated by the Victorians!

Also not to be despised is the flat-patterned painting on the smooth wooden sheathing of the nave roof carried out by Clayton & Bell, the glass painters, who were also responsible for the apse windows and three others in the aisles. By now the coloring of the roof has become quite soft and mellow and serves chiefly to point up, by its relative strength and clarity, the very weak tonalities and general lack of architectonic vigor in Watt's mural above the chancel arch.

After the heavy confusion characteristic of Early Victorian open wooden roofs, fine though some of them are, the clean spatial effect of this polygonally ceiled covering, with very light curved principals barely breaking the continuous tunnel and the most rigidly simple and linear of iron tie rods and king posts, has a very 'real', not to say modern, look. But the shortness of the nave ($58 \times 25\frac{1}{2} \times 44$ feet high) and the lowness of the chancel ($37 \times 20 \times 31$ feet

high) spoil any really impressive effect of interior space such as Butterfield almost always achieved, even under the most hampering site restrictions.

In the ornament, moreover, Street was less ready than Butterfield, having once opted for polychromy, to forego plastic effects. Thus the notching he had introduced in the jambs and voussoirs at Maidenhead is here used on almost every brick edge in an almost obsessive way. This sort of excess was to be much followed in the '60s by the 'Lower School' of Victorian Gothicists in churches and all sorts of other work. But it is the carved stone detail that is most striking. The virtuosity of the pulpit, even in the high-relief figure compositions, is doubtless more acceptable today in Street's own original drawing (fig. 16) than in its finished form as carved from models made by Farmer, but it is most unusual for the '50s. The tremendous capitals of the nave arcade, modeled by Pearce after drawings by Street, also have figure compositions on them illustrating parables and miracles, something otherwise almost unknown in Victorian England.

But the very boldness of relief in these features illustrates Street's uncertainty at this point—shortly to be resolved—as to whether he was more interested in Italian effects of surface polychrome or in 'Early French' effects of bold articulation of parts and concentrated plastic interest. Some of the capitals, which are at or little above eye level, are almost as great tours de force as the iron grillework outside—the metalwork inside (by Leaver of Maidenhead) is distinctly inferior. Like some Romanesque capitals of comparable elaboration but richer patination, these might be more highly appreciated as independent objects in a Museum than *in situ*, where the shininess of the squat granite columns and the contrast with the surrounding brick notching and banding provide a most in-harmonious setting.

That Street's sense of style was less coherent and personal than Butterfield's is a comparison of his church with All Saints', Margaret Street, just completed as St. James's was being begun, or the more precisely contemporary London church of St. Alban, Holborn,⁸³ readily illustrates. But that it was full of *trouvailles*, indeed almost more of a collection of 'crotchets' that lesser men could and did exploit for a decade and more than Butterfield's work, is equally evident. This church alone would serve to establish Street's rank as the second High Victorian Gothic architect of the '50s after Butterfield. In professional prominence and material success, moreover, he was beginning now to catch up with Scott.

Yet St. James's is certainly not a Street masterwork as St. Dionis's might possibly have been. A more characteristic product of Street's hand of the end of the '50s may be



Fig. 17. Church at New Bradwell, near Wolverton, Bucks. (from *I.L.N.*, 19 June 1858, p. 608).

seen in such a moderate-sized country church as that near Wolverton in Buckinghamshire begun in 1858, even though this never received its projected spire.⁸⁴ The church, intended to hold some 750 persons, and the associated schools were planned to provide for the spiritual and educational needs of the families of the workmen who had been drawn to the neighborhood of Wolverton by the locomotive and carriage works newly established there by the London & Northwestern Railway. Already the company had established one village of company houses; now another such was under way in the parish of Stantonbury, with 150 cottages already built. The company, urged on by its chaplain (do the nationalized railways still maintain such spiritual engineers?), the Rev. J. Lovekin, appealed to the shareholders for contributions. Surprisingly enough the shareholders subscribed £3,200 toward the church and the neighboring landowners and clergy were even more generous.

The Marquess of Chandos (chairman of the company) laid the first stone of the church and his 'noble lady' that of the school, on 24 May 1858. They were received by Mr. McConnell, who combined the positions of locomotive

83. This was very badly damaged in the blitz but stood for some time as a splendid ruin. Unhappily it is now being rebuilt in a most unsympathetic way.

84. See John Betjeman and John Piper, *Murray's Buckinghamshire Architectural Guide* (London, [1948]), 114. The parish was Stantonbury, but the actual location of the church is known as New Bradwell.

superintendent and church warden. The workmen of the company and their families were provided with a substantial dinner under the same marquee as the noble and clerical visitors, as was touchingly reported by the *Illustrated London News*.⁸⁵ It was then estimated another £3,000 would be required to complete the church, although the schools, parsonage, and teachers' dwellings could be finished within the year.

Since New Bradwell was a country church Street was content to follow the established models of the '40s, providing an articulated chancel and a low clerestory. This was lighted only by two cusped oculi on each side, though there are four bays in the nave (fig. 17). But Street put all his strength into the design of the great northwest steeple, unhappily never built, and gave his special sort of sturdy richness also to the plate tracery that heads the wide east window. On the tower the plain buttresses are stopped below the belfry stage, where corner colonnettes enrich the form plastically yet without confusion or fussiness. The two plain orders, slated louvers, and simple plate tracery of the belfry openings have a simple vigor which the broached spire of stone was to carry upward. Rather plain crocketed capitals would have lent a slightly 'Early French' flavor to a conventionally English model—based on the mediaeval spires of Northamptonshire—and the tall stone dormers would also have had an air of the late twelfth century across the chancel.

The materials of the fabric were well chosen and well handled, rough stone for the walling and cut stone for the simple trim. The only note of polychromy is provided by red ridge tiles above the slate roof.⁸⁶ But the result is exactly what Street intended, a village church without elaboration, not unworthy to take its place with those of the past yet with a quietly individual flavor. Many, many other architects, hesitant to move far outside familiar Camdenian channels, were doing much the same, but rarely with such dignity and craftsmanlike integrity. This church, one can believe, would have warmed Pugin's heart. It can still be respected a century later.

Before discussing the New Bradwell schools, together with other comparable work of the decade, one further design for a relatively large church, dating from the year after the initiation of both St. James's in Westminster and that at New Bradwell, should be mentioned. In 1854 Street had restored and made some minor additions—south porch, north aisle, northeast chapel, and new roofs throughout—to St. James's, Cowley, near Oxford. Presumably in 1859, since the design was published late in that year, he made a project for a new church at Cowley that was never built (fig. 18).⁸⁷ All of stone, the semicircu-



Fig. 18. Project for church at Cowley, Oxon. (from *Civil Engineer and Architects' Journal* xxii, pl. 28).

lar chancel was nevertheless quite like that of the Westminster church and the west tower, nearly as wide as the tall nave, had a spire resembling closely that intended for New Bradwell, but with the curious drip mould of the Westminster tower linking the paired belfry lights. Polychromy appeared only in the banding of the larger arches; the material was otherwise random ashlar, but apparently intended to be smooth finished not rock or quarry-faced. In some ways this design was premonitory of his next major work, St. Philip and St. James's, in North Oxford, begun in 1860. But that fine church initiated a new period in his work and will not be dealt with in this article.

The major ecclesiastical and secular works and projects of the years 1854–1859, while Philip Webb was in Street's offices first in Oxford and then after 1856 in London, represent only one side of Street's practice, and the side which was presumably less sympathetic—or at least less formative—to his pupil and assistant. Throughout these years Street was engaged, partly in the diocese of Oxford of which he was diocesan architect but in a much wider geographical area as well, on a multitude of church restorations.

If in his original designs Street consciously set out to rival Butterfield—and presumably Scott as well—in such work he was far less drastic than they, with real interest in maintaining and repairing old work and less tendency to turn each restoration into a partial or complete rebuilding. Yet many of these restorations did entail the addition of aisles, chapels, or porches, as at St. James's, Cowley, and sometimes, where the churches to be 'restored' were not

85. *ILLN.* (19 June 1858), 607–608.

86. Irrelevant to Street, but agreeable in itself, is the stained glass described by Betjeman and Piper as 'Art Nouveau of c. 1900' and signed 'M. B. Cantab.'

87. *Civil Engineer and Architect's Journal* xxii, pl. 28.



Fig. 19. Tower, St. Michael and All Angels, Sandhurst, Berks. (photo: National Buildings Record).



Fig. 20. Exterior, St. James-the-Less, East Hanney, Berks. (photo: National Buildings Record).

mediaeval but of later or even of nineteenth-century date,⁸⁸ led to the effective rebuilding of the whole or the encasing of the original edifice almost completely with new construction. St. Michael's, Sandhurst, in Berkshire appears at first sight to be an example of the latter process, but in fact is an example of almost total rebuilding despite its mediaeval origin. The early thirteenth-century church here had been small, without aisles, but had north and south doorways, some Early English windows, and a more or less Norman chancel arch. Using funds partly obtained by subscription and partly from the Diocesan Church Building Society, Street rebuilt the whole church in 1853–1854. Although he added a south aisle and retained little of the original walling, Street copied the mediaeval south door and retained or copied the chancel arch—for the most part apparently the latter. Much later, in 1868, a north aisle, the present deep chancel, and the side chapels were added; while the north porch dates from 1887, well after Street's death.⁸⁹

The interest of the church as a real work of Street, and not a mere 'restoration', resides in the splendid south-west tower rising above the south portal (fig. 19). The masonry portion of the tower, closely related to the plain gable of the west front, is not tall—reaching, indeed, only to the level of the top of that gable—but like the rest of the exterior it is of handsome quarry-faced squared stone with plain flush trim of a lighter-colored cut stone. What is quite original in character for the High Victorian period—although inspired by old work in nearby Surrey—is the wooden superstructure. Immediately above the stonework is a band of weatherboarding mitred at the corners; then comes the framed belfry, with the square openings of the grid chamfered out to circular shapes; and over all the shingled broach spire with tiny dormers set low in the cardinal faces.

What an education it was for Philip Webb, coming into Street's office in 1854, to find such work going forward! At the same time the restoration of relatively simple old buildings was giving him a surgeon's insight into the anatomy of vernacular mediaeval craftsmanship. Such practice in restoration might not have made the same impression on him had the work been concerned, as later in Street's life, with cathedrals of complicated design and elaborate finish.

How much responsibility Street delegated to Webb must be only a guess—presumably little or none in design, but doubtless considerable in the supervision of the smaller and more repetitious commissions. The very modest church of St. James-the-Less of 1856, at East Hanney in Berkshire, may be cited. Of this the late H. S. Goodhart-

88. Tilehurst in Berkshire has been mentioned, where only the brick tower of 1731 was spared.

89. I am grateful to the present rector, the Rev. J. J. E. O'Malley, for supplying information concerning the history of this church.

Rendel wrote: 'It is remarkable for its date—just a barn with a few irregularly placed windows entirely different from the Puginist type of nave and chancel chapel (e.g. Fernham and Littleworth). The stonework is well detailed, the woodwork stained and varnished, the trussed rafter roof a bit too thin.⁹⁰ There are neither tower nor aisles here and a single tiled roof covers nave, chancel, and south porch (fig. 20). Just a vigorous buttress, abutting the only internal cross arch, and a slightly raised eaves line set off the chancel externally. The smooth-cut stone trim at the openings, flush with the delicately scaled and textured coursed rubble of the walls, is unmoulded; the triple trefoil-headed lights of domestic scale are outlined only by plain chamfers, as are the rear arches and the chancel arch inside (fig. 21). The rafters do seem rather underscaled, as so often in Pugin's roofs, but the cross-braced principals are certainly vigorous bits of carpentry.

Comparable work, probably designed along with the rest of the convent in 1855, but executed in 1858–1860, is the smaller chapel of St. Mary's Home for Penitents at Wantage (fig. 22). The glass in the east window went in the blitz; but this only enhances the severe 'realism' of the interior, with its plain chamfered rear arches of cut stone, nicely scaled random ashlar, and open raftered roof. Only the chancel end is ceiled in barrel form.

Between such very simple churches and the schools Street built to go with them or with earlier churches there is not a great deal of difference. As on that at Denchworth in Berkshire (fig. 1), built in 1851 but enlarged later, there is often a cross gable, and the tapered chimney is usually strategically placed to provide a strong vertical and plastic accent. The red-brick schools of such larger churches as All Saints', Maidstone, of 1854–1857 and of St. James's, Westminster, of 1858–1860 are more elaborate, with window tracery and considerable striping and patterning in black brick; yet they are often more regular and less picturesque.

The relatively large schools designed in 1858 for New Bradwell or those for Chatham of a year or two later are more extensive than the characteristic country schools built earlier in Cornwall and in Berkshire. But despite their functional articulation, with various gabled dormers, and the introduction of plate tracery in the larger windows, the standard lights are like those of the East Hanne church or else provided with colonnette mullions, such as he had first used on the Wantage convent of 1855–1856, carrying lintels under pointed relieving arches (fig. 23). In the rather earlier cottages of 1853 at Hatford, near Farringdon in Berkshire, the windows were even more plainly handled, with paired rectangular lights under segmental relieving arches. The bargeboards of the dormers



Fig. 21. Interior, St. James-the-Less, East Hanne, Berks. (photo: National Buildings Record).



Fig. 22. Chapel, Convent of the Wantage Sisterhood, Wantage, Berks. (photo: National Buildings Record).

90. Quoted by John Betjeman and John Piper in *Murray's Berkshire Architectural Guide* (London [1949]), 127–128.



Fig. 23. Schools, New Bradwell, near Wolverton, Bucks. (from *ILLN.*, 19 June 1858, p. 608).



Fig. 24. Cottages, Hatford, near Farringdon, Berks. (photo: National Buildings Record).

are scalloped, however, and the stone chimneys are fairly elaborately chamfered to suggest the four flues inside (fig. 24).

On such modest works, with the production of which he was so closely associated for five years, Webb had his basic apprenticeship. But as he was to be throughout his life primarily a domestic architect, it was naturally the vicarages and rectories, of which Street produced so many in these years, that influenced him most. The rectory of All Saints', Maidstone, of 1854–1857, underway in his first years with Street, does not at first sight seem very Webblike because of the stridency of the polychromy and the rather elaborately shaped heads of the wooden lights of the windows (fig. 8). Such ornamentation Webb was to abjure from the first; yet the asymmetric massing, the large, functionally placed windows, and the excellent craftsmanship of the brickwork are all found in the Red House, built for Morris at Bexley Heath in Kent in 1859–

1860, Webb's first and (curiously enough) his best-known work (fig. 25), and also at Benfleet Hall near Esher for the painter Spencer Stanhope, which followed in 1860–1861.

The closest prototype for Webb's early houses is to be found in such a more modest rectory as that of St. Ebbe's, in Paradise Square in Oxford, which was rising in 1854–1855, just as Webb began to work for Street (figs. 26, 27). Here the front has large rectangular window-lights grouped in threes below segmental relieving arches, and only those to the right of the entrance and in the bay window around the corner display even the simplest decorative shaping of the slim chamfered mullions.⁹¹ As on the schools, a shaped chimney stack, rather than a second gable, balances the cross gable to the left; while the bedroom windows break up rather casually through the eaves into plain hipped dormers.

These simple works by Street of the '50s, contrasting so sharply with his large churches and his ambitious secular projects, make evident that much of the credit traditionally assigned to Webb for initiating a new and more straightforward sort of house design at the Red House belongs properly to his master. In his major churches Street produced several of the most strikingly characteristic works of the early years of the High Victorian Gothic. In his chapels, schools, and vicarages he vigorously developed a new vernacular of which Pugin and Butterfield had provided the earliest exemplars in their non-ecclesiastical work of the '40s. From that Webb at once went forward upon beginning his own practice. Both he, and a few years

91. The tall two-story wing to the left of the bay window in figure 29 was added by Street in 1868 to provide a larger drawing room. Although Norman Shaw had left Street's employ by that date, it is not wholly fanciful to see here one of the prototypes of his characteristic tall window-walled bays.

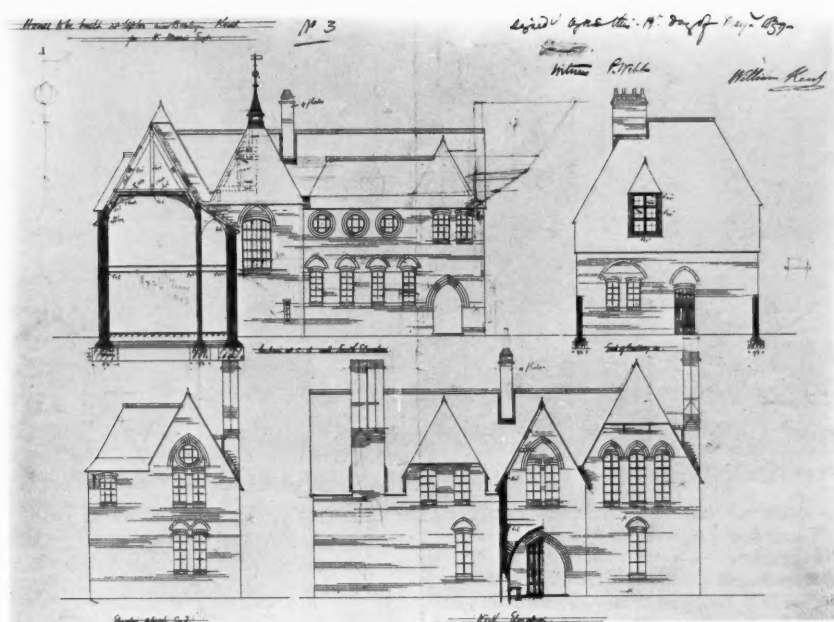


Fig. 25. Elevations, The Red House, Bexley Heath, Kent (from Webb's contract drawings in the Victoria and Albert Museum, Crown copyright reserved).



Fig. 26. Front, St. Ebbe's Rectory, Paradise Square, Oxford (photo: National Buildings Record).



Fig. 27. Side, St. Ebbe's Rectory, Paradise Square, Oxford (photo: National Buildings Record).

later Norman Shaw, evidently owed a great deal to their years with Street.

What the younger men could contribute from the first were modifications of the parsonage type of house, especially in plan, that removed the later domestic development from the strict Tractarian line. Artists—and later businessmen—were their clients not the clergy;⁹² and

when the ties that linked the High Victorian to the church, and hence to overt Gothicism, were at last severed a new stylistic phase began to which it is quite ridiculous, before the early '70s, to apply the name Queen Anne. As is always likely to be the case, the roots of that new phase go back all the way through the preceding one, for neither Webb nor Shaw seem to have been influenced by that richer phase of Street's work of the mid and late '50s that rivalled the London churches of Butterfield.

92. See 19th & 20th, 209.

AMERICAN NOTES

Greek Revival Weighlock, Syracuse, 1849-1850*

HARLEY J. MCKEE

This monumental building with its feet in the Erie Canal would have surprised the temple architects of ancient Greece, but we are happy to hear that it will be preserved.

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Thought to be unique, this building has been threatened repeatedly in recent years. Its preservation has now been assured, and it will become a canal museum.¹

The weighlock was the third at this location—nine miles from the central point of the Erie Canal,² at its junction with the Oswego branch—to serve for collection of tolls and inspection. The first, built in 1824, weighed

boats by the hydrostatic method. In 1828 large scales were substituted; in 1834 the wooden lock was rebuilt with hammered stone laid in hydraulic cement, covered by a two-story wooden building (32 by 73 feet). The present weighlock, the most substantial of the three, was built to accommodate the larger and heavier boats which came into use by mid-century. Its character indicates the probability that it was designed by an architect. If so, his name is not known; and no original drawings remain. Construction was begun in 1849 by carpenter Edward Fuller and masons William D. Champlain and James Thorne.³ The weighing lock, built by Kasson and Lewis, was placed in use soon after navigation opened in April 1850. It cost \$17,516.77, including a discharge to Onondaga Creek, and was equipped with a Whipple two-section scale. The manner of operation may be of interest. After a boat was drawn into the lock the gates were closed at each end, the water was drained out, and the boat settled onto a massive cradle suspended from the balance beam over head. The gross weight of the boat and its load was recorded in the scale room and the registered or empty weight of the boat was subtracted from the total. The net weight of the load was the basis on which tolls were assessed. The building proper was opened on 22 July. It contained space on the ground floor for the weigh master and toll collector, with sleeping rooms for night men. On the second floor were offices for the engineers and superintendents of repairs.

On 1 January 1883 tolls on all New York State canals were abolished, but the Syracuse weighlock was retained in use to weigh cargoes for the information of shippers, and to provide a dry dock for emergency repairs. The building continued to house canal engineers and maintenance officials. In 1906 the scales were removed and the second floor was extended out over the lock, and in 1936 the portico which housed the lock was enclosed on the first floor. The building continued to be occupied by of-

3. The contract, dated 28 September, set the cost at \$7,950.00, but additional work brought the final total to \$8,283.37. At that time prices were considered high, with skilled laborers demanding twelve cents per hour.

*The author wishes to acknowledge the data furnished by the Onondaga Historical Association, and particularly the major help given by its president, Richard N. Wright. He has been a leader in the efforts to preserve the weighlock building and to increase the knowledge and appreciation of its worth.

1. Proposals to abandon the building, to raze it for a parking lot, and to demolish it to make way for an access ramp, have finally been defeated with the passage of a bill (Chapter 906 of the Laws of 1960) by the New York State Legislature which was signed by Governor Rockefeller on 28 April 1960. It provides for transfer of title to the County of Onondaga. Onondaga's Board of Supervisors has voted to accept the building from the State; the County will underwrite basic annual maintenance. The Onondaga Historical Association will be responsible for its administration, acting for the County in operating details. The Canal Society of New York State will plan and develop exhibits, as well as the educational programs. A Weighlock Museum Council has been formed to co-ordinate the efforts of groups and individuals working for the museum's development.

2. The Erie Canal was built by the State of New York in three sections. The middle one, from Rome to the Seneca River, was begun on 4 July 1817, and completed on 4 July 1820. The entire length of the canal was completed on 26 October 1825, but navigation over shorter distances was carried on as soon as the various sections opened before this date. See Noble E. Whitford, *History of the Canal System of the State of New York, together with Brief Histories of the Canals of the United States and Canada* (Albany: Brandow Printing Co., 1906).



Fig. 1. Weighlock from the northwest, Syracuse, New York, 1903 (courtesy Onondaga Historical Association).

fices of the State Department of Public Works until 1957, and has been vacant since then.⁴

The weighlock building is two stories high with brick walls measuring 80 feet long and 59 feet wide (fig. 1). More than half of the first floor, along the canal, originally was taken up by the lock which was sheltered by a portico of eleven square piers with Greek Doric capitals. It has pediments on all four sides with the cornice mouldings supported on brick corbels. It is in sound condition and is generally complete except for filling in of the lock and removal of the weighing mechanism and trusses. The principal additions—the extended second floor, and windows between the piers of the portico—are clearly distinguishable as such. Here is an unusual and remarkable structure, now preserved for the edification of scholars and laymen alike. Its environment has changed considerably, however. Several warehouses adjoining on the east, shown in the photograph of c. 1875 (fig. 2), are still in existence, but are seriously jeopardized by commercial progress. The canal itself has been filled in since the 1930s and is a busy boulevard. This has its advantageous side, however, because the Weighlock Canal Museum will be accessible to local and distant visitors with equal ease.



Fig. 2. Weighlock from the east, Syracuse, New York, c. 1875 (courtesy Onondaga Historical Association).

4. From a chronological history of the weighlock by Richard N. Wright, in the *Onondaga Historical Association Bulletin* (November 1957).



Fig. 1. Filling station, Cloquet, Minnesota, by F. L. Wright (photo: Eugene D. Becker).

Frank Lloyd Wright Filling Station, 1958

ROBERT C. WHEELER

In his lifetime we suppose that no architect ever published more about himself—or was more published about—than Frank Lloyd Wright. We were willing to let other editors have the subject. Now that Wright is gone we offer you the story of a venture which seems not to have been reported elsewhere. It is the most recent history we have ever covered in this department. The filling station, as an all too conspicuous feature of the American roadside, deserves further investigation.

Mr. Wheeler is Assistant Director of the Minnesota Historical Society at St. Paul.

—Ed.

'It will be worth every cent', the late Frank Lloyd Wright assured Ray W. Lindholm when he designed a filling station for Mr. Lindholm in Cloquet, Minnesota (figs. 1 & 2). Architectural historians respect this northern Minnesota building as the only gas station ever constructed from a design by the famous and controversial architect. It was designed in 1956 and built in 1958. Wright apparently intended to raise the utilitarian style of a gas station to the level of architectural art, for in his book, *When Democracy Builds* (Chicago, 1945), he writes: 'Imagine, now, spacious landscaped highways . . . Giant roads, themselves great architecture, pass public service stations now no longer eyesores but expanded as good architecture to include all kinds of roadside service for the traveler, with charm and comfort throughout.'

Set among the conventional dwellings and small-town business establishments of Cloquet, the three-level steel and cement block structure features a thirty-two-foot copper cantilevered canopy, a glassed-in observation lounge (fig. 3), rest rooms on the mezzanine, radiant heat, decorative planters, and ceramic tile walls. Four service bays for car washing, tune-up work, and lubrication, plus special lighting are incorporated in Wright's design. An interior-illuminated pylon sign extends sixty feet into the air from atop the canopy. Everything in the station building, including the color scheme, was designed by Wright.

The original plan featured roofs cantilevering from the central structure. Gas was to be supplied from overhead pumps, leaving the ground completely free for the unimpeded movement of vehicles. Placement of conventional pump islands is a matter of constant concern with all oil companies and many variations have been used. Wright, with one master stroke, theoretically eliminated that problem with an overhead hose, thus allowing the customer to drive anywhere under the canopy to be served. Unfortunately, this feature could not be used in the Lindholm station because of safety codes demanding the storage of gas underground.

According to the Frank Lloyd Wright Foundation at Spring Green, Wisconsin, Wright first designed an 'ideal filling station' in the 1920s, and later incorporated the design into his project for a model community—Broadacre



Fig. 2. Filling station, Cloquet, Minnesota. Night photograph shows sixty-foot illuminated pylon and glassed-in observation lounge (photo: Eugene D. Becker).



Fig. 3. Filling station, Cloquet, Minnesota. Observation lounge overlooking service drive (photo: Eugene D. Becker).

City. He conceived it as the nucleus of a center including shopping and recreation areas. 'This was the beginning of the idea of decentralization and the modern shopping center', writes Richard Carney of the Wright staff. These centers of distribution, according to Wright, would become the distributors of many things that Marshall Field, Sears Roebuck, or Wanamaker now distribute to the congested crowds 'senselessly swarming in from the country on to hard pavements and back again'. The Lindholm station is a modified working model of what could become a standard prefab station; this, Wright felt, was the answer to low-cost service stations.

'It's an experiment to see if a little beauty can't be incorporated in something as commonplace as a service station', explains Mr. Lindholm as his reason for commissioning Wright to design it. The two men were acquainted before the station project, for the architect had designed the Lindholm residence a few years earlier. Mr. Lindholm, in his conferences with Wright, found him sympathetic, but far from modest. He had both awe and reverence for his own designs and resisted any alteration of them. 'In filling stations, as in homes, I build for generations, not a few years!' he reminded the owner. 'Take it or leave it' was the implication. Mr. Lindholm took it.

BOOKS

Kenneth J. Conant, *Carolingian and Romanesque Architecture: 800-1200* (Baltimore: Penguin Books Inc., 1959), 343 pp., 80 figs., 184 pls. \$12.50.

English-speaking students of Mediaeval art have long been waiting for the *summa* fusing the many aspects of Romanesque architectural expression into a clearly organized structure. The work of Dehio, von Bezold (1901), P. Frankl (1926), and in English of A. K. Porter (1909), and A. W. Clapham (1936) were in need of being reshaped and brought up to date. Many monographs of the last decade have led up to Romanesque art, as Grodecki's exemplary work on Ottonian architecture which Mr. Conant was unable to use. A multitude of studies on regional schools have recently appeared and a flood of literature is available on specific, often controversial, questions as for instance the dating of Durham or Sant' Ambrogio in Milan. Finally, a number of articles have dealt with the meaning of architectural parts—the 'west work' for one—and the term 'iconography of architecture' is beginning to designate a school of thought which is built upon the body of archaeological evidence.

Conant thinks of the Romanesque period as a *media aetas*; that is, a world between Antiquity which it admired and often imitated and the Gothic age with its consolidated town society. Romanesque was the time of monasticism, heroic pilgrimages, and the crusades. But these individual movements which Conant stresses are but the figures woven upon the fabric of feudal society. Romanesque architecture was also a baronial architecture and its immensely assertive qualities express this over and over again. Only once were the powerful qualities replaced by an exclusive emphasis on spirituality; namely, in the monastic architecture of the early Cistercian oratories and functional building groups.

Conant's liveliest passages are centered around the imperial monasteries of the Carolingian period—especially Centula and St. Gall—and lead up to the beautifully handled description of the role of Cluny and its expression in buildings comparable to the imperial cathedrals along the Rhine. Conant's rediscovery of Cluny as a keystone of Mediaeval architecture which he has presented to us in a series of publications and restorations might account for his often unusual terminology. The tendency has been to isolate Carolingian more and more, to give it a profile as a moving age of experimental eclecticism which could rise to statements of the highest quality. Then—as Grodecki has shown—we have a first clearly defined monumental style which has been identified with the Ottonian rulers. Its bare grandeur is different from the hesitant formulations of Charlemagne's attempts at a revival of Roman imperialism through costly monuments. Its fluid one-room concept is distinct from the megalithic additive passion of the Romanesque architects who erected monuments to a supreme feudal Lord. It was the Ottonian planar wall and wide interior space which was to govern the basic approach of Italian and German architecture. The new style of the pilgrimage churches and of France, the Duchy of Burgundy and the Kingdom of Arles, was being formulated through articulated potent walls.

We can of course not disassociate any of these movements from earlier discoveries. One will be thankful to Conant for pointing out relationships between North and South in the Carolingian and Ottonian age which have become too obvious to be taken at face value

by many art historians. The chapters on Asturia and Spanish Romanesque will be deeply appreciated and will in their emphasis on vaulting forms certainly have a lasting influence. The term 'Earlier Romanesque' under which Conant gathers Ottonian buildings and the 'Premier Style Roman' which have different roots and lead to different products is discussed with a wise disregard of dating controversies raging around 'Lombard' architecture at the moment. Occasionally there is perhaps an artificial fragmentation which is unavoidable in such a general work. Essen, as influenced by Aix-la-Chapelle, is mentioned without its sister in spirit; namely, Ottmarsheim which according to date finds its place at the end of the book. But the subtle and penetrating descriptions of the 'Kaiserdom', especially Speyer, are certainly among the most powerful pages written on these often neglected monuments.

These insights can only be compared with the masterful analysis of the character and construction activity of the exceptional figures responsible for the successive buildings at Cluny. On the basis of these pages alone the honorary citizenship of Cluny which was recently awarded to Mr. Conant was certainly well deserved. The discussion of mature Romanesque becomes an irrevocable *Apologia apud Bernardem abbatem* which might have convinced even the austere saint who lived in an attic of Clairvaux Abbey that there were true values hidden in the splendor of Cluniac monastic buildings. Time seems to have sided with Odo, Hugo, Pons, and the mild Peter Venerabilis. On the other hand, one can be certain that the Cistercians—who, by the way, have returned to Poblet and restored the ruin—would have objected to their identification with any term mentioning the words half and Gothic. The practical broken barrel vaults, as used in Cluny, and the unification of space achieved in their churches as a by-product of simplicity were, as Conant points out, important in terms of a preparation of many parts of Europe for the new Gothic vocabulary. But rib-vaulting was significantly enough only introduced after Saint Bernard's death and used sparingly during the initial stages.

One deeply wishes that Mr. Conant, who points out the inter-regional character of French Romanesque, had dealt more extensively on this conclusion. For here lies the opportunity to point out the common features within a changed aesthetic atmosphere of the great years between A.D. 1080-1144. It is only through the straightforward discussion of school characteristics that a hidden pattern emerges which could have led to a new formulation of the principles governing Romanesque taste.

One appreciates the line drawings as, for instance, the rarely seen cross section of St. Étienne de la Cité in Périgueux, which might well hold the key to the whole problem of the domed churches of Aquitaine. The book ends with a most interesting *aperçu* on the Romanesque solutions adopted in Spain, Italy, Germany, Britain, Northern France, and the rarely discussed Scandinavian churches. Here a catalogue following general chapters might have offered an easier solution than an account which by necessity often becomes hurried. Lacunae, as for instance the eventual transformation of the Arelat group into hall churches or a discussion of some Swiss examples (Mistail, Grossmünster in Zürich) and the Serbian group around Lake Ohrid, are as unavoidable as occasional mistakes on the maps. The plates are very much to the point and with one exception

clear. The restoration drawings which have long been a speciality of Conant help to give a general three-dimensional effect of lost buildings, even if they are partially hypothetical. The style is fluid and in technical discussions extremely lucid.

Conant states initially that he intends to analyze the genesis, development, and transformation of Romanesque architecture. He gives us rather a wide panorama and an amazing series of very succinct descriptions. If we take into account that the manuscript was completed several years ago, and some important publications could not be included, we can understand that rapidly moving research has already modified some of Conant's statements. As a work requiring patience and immense enthusiasm this volume, which truly sums up his study of Cluny, will keep a deserving place in the rapidly expanding Pelican History of Art series.

FRANÇOIS BUCHER
Brown University

George Kubler and Martin Soria, *Art and Architecture in Spain and Portugal and their American Dominions, 1500-1800* (Baltimore: Penguin Books Inc., 1959), 445 pp., 192 pls., 44 figs. \$12.50.

Art and Architecture in Spain and Portugal is notable among the European volumes of the Pelican History of Art because of the vast amount of material it contains. The period is that of the Renaissance and its aftermath (1500-1800), but here the story is not limited to a single art, as with Sir John Summerson's volume on British architecture of the Renaissance tradition or to a segment of the movement as in Sir Anthony Blunt's study of French art of the sixteenth and seventeenth centuries. This book deals with the development of all the major arts in the two Iberian nations and their projection in Latin America throughout three centuries. It is concerned with some of the greatest artists of this period—El Greco, Ribera, Velasquez, Murillo—and a host of architects and sculptors quite as significant as those of Germany and the Low Countries.

As a result it has been necessary to compress and abbreviate, to present facts tersely and without embellishment in an heroic effort to trace a series of great developments in a minimum of space. This is particularly true of the section written by Kubler on architecture, allotted 119 pages out of a total of 348, with 108 illustrations from a total of 329. The author has met the first limitation, involving text, by a masterful condensation of material, especially in the section on Spain itself, where each essential achievement stands out in utter clarity. He was enabled to do this by having written a short time before what is now the standard history of Spanish Baroque architecture. The second limitation, that of illustrations, could not be entirely overcome. This shortage is particularly noticeable in the colonial sections, where there are photographs of only three buildings from Guatemala, two each from Ecuador, Columbia, and Cuba, and only one each from Brazil and Argentina! There are certain outstanding omissions, such as the façade of the cathedral of Santo Domingo, which is the first Renaissance ensemble in the new world, the magnificent interiors of the Franciscan and Jesuit churches of Quito, as well as all the ultra-baroque church interiors of Mexico. This is the chief shortcoming of the volume. It reflects in no way upon the capacities of the distinguished co-authors, Professor Kubler of Yale and Professor Soria of Michigan State. The latter wrote on the arts other than architecture. They must have been constantly frustrated by this limitation.

In writing about the Renaissance architecture of Spain, Professor Kubler makes a number of points that are of interest for the history of architecture as a whole. He finds, for example, that the Infanzado Palace at Guadalajara, built by Juan Guas in 1480-1483, is the first Renaissance palace of block design erected outside Italy. The first open-well staircase in Europe was constructed in the cloister of San Juan de los Reyes at Toledo in 1504, the second by Enrique de Egas at the Hospital de Santa Cruz in the same city a few years afterward. The scheme of the cathedral of Granada, evolved by Diego de Siloe in 1538-1541, under the influence of the Holy Sepulcher in Jerusalem, is the 'most complex in the history of cathedral designs'. The vestibule behind the east entrance to Pedro Machuca's palace for Charles V in Granada, which appears to have been designed in 1527, is one of the earliest oval rooms in Europe. Finally, the blind-aisled or cryptocollateral churches of the late fifteenth and early sixteenth centuries in both Spain and Portugal lead directly to the famous ground plan of the church of the Gesù in Rome.

The question of Spanish architectural influence in Europe, interesting as it is, was but a minor issue. The great objective of this study was to explore the manifold foreign influences on Spanish architecture itself (Italian, Flemish, and French); that is, to relate these influences to pattern books and to specific monuments abroad, and at the same time to determine the prime characteristics of Spanish architecture as it grew up in the Iberian peninsula and as it expressed itself in Latin America. These two things Professor Kubler has succeeded in doing in impressive fashion. The development of Spanish architecture is meticulously traced through the Plateresque, High Renaissance, and various Baroque phases to the Neo-Classical, which is rightly given the importance it deserves, after a period when it has been customary to look down upon it. Regionalism, a factor so much more important in Spain than in France, is carefully considered in each successive style. In addition, Professor Kubler stresses the development of the cryptocollateral church plan in Spain (though not in Latin America), the rectangular Spanish cathedral plans reflected in various parts of Spanish America, and the concept of the *camarín*, a richly decorated apartment behind the high altar which he traces back to Juan de Herrera's plan for the church of the Escorial. These, together with a certain Hispanic canon of squat proportions, the projection of Mannerism (including the archetypal retablo façade) into the eighteenth century, and the avoidance of the orthodox Rococo, are established as basic characteristics of Spanish architecture.

The section on the colonial architecture of Spanish America is of great interest not only because it is the most comprehensive account of the subject save Diego Angulo Íñiguez's huge three-volume *Historia del arte hispano-americano*, but also because of the new theories that it contains. Outstanding are the discussion of Cuban architecture of the late eighteenth century in the light of influences from the style of Vicente Acero of Cadiz (a port which replaced Sevilla in 1717 as the Spanish center for shipping to America), the examination of the buildings of the Audiencia of Quito as the purest importation in Latin America of architecture of European sources, and the passages dealing with the 'antiphonal sequence' between Cuzco and Lima in the development of the Peruvian Baroque style. Professor Kubler, who in 1948 published an impressive study of Mexican architecture of the sixteenth century, naturally deals with that subject with supreme competence. He emphasizes in general two facts in relation to the history of Spanish colonial architecture. The first is that Latin American builders were even more prone to cling to Mannerist procedures than their contemporaries in Spain. The second is that there is very little really indigenous expression in their architecture. Here he differs with a number of recent writers on this subject.

In dealing with Portuguese architecture, however, he liberally recognizes the various distinctly Lusitanian traits, which he summarizes tersely and effectively at the beginning of this section, one of the best in the book. This little-known subject, where Professor

Kubler has had to pioneer as he did not have to do in other sections, is rendered especially significant by constant comparison with the architecture of Spain. The treatment of Portuguese architecture in Brazil, on the other hand, is disappointingly brief. No consideration is given to the colonial buildings before the eighteenth century and none to civil architecture of any epoch. Here more than anywhere else the tight scheme of wordage oppresses the author and disappoints his readers.

The sections on sculpture and painting, admirably handled by Martin Soria, offer a huge panorama which in many cases is corollary to the architecture. This is especially true of the sculpture, much of which consists of wood-carved altar-pieces, pulpits, and choir stalls, that are part of the furnishing of the churches.

ROBERT C. SMITH
University of Pennsylvania

Ada Louise Huxtable, *Pier Luigi Nervi* (New York: George Braziller, 1960), 44 pp., 131 figs. \$3.95. Masters of World Architecture.

The inclusion of this book in a series entitled 'Masters of World Architecture' merits the deepest concern of every architectural historian. Is Nervi in fact an architect at all? Mrs. Huxtable claims that 'Nervi thinks of himself primarily as an architect as is obvious from his statement "the proper title of a man capable of conceiving and building a structure is *architect*"', but in fact this quotation (from *Structures*, p. 11) is not a claim by Nervi to be himself an architect, but is on the contrary a claim that 'the departments capable of training this kind of man should be the departments or schools of architecture'. Nervi is content to call himself a 'designer and builder', and has always made a point of acknowledging the collaboration of architects who have contributed to his designs.

Creative civil engineering became separated from creative architecture for several very good reasons, and it is only since the publication of *Space, Time and Architecture* that it has been so hard to distinguish which is which. Mrs. Huxtable rightly observes that the separation occurred in the mid-eighteenth century, but she is, I suggest, misleading in attributing this event simply to the general fact that 'natural and applied science moved into the field of technology and industry, and out of the realm of art'. The division occurred specifically when bridge designers increased bridge spans beyond the technical capabilities of stereotomy. The specialized structural engineer was created solely by this need for long spans, and it is as the creator of beautiful long-span structures that Nervi has made his mark.

One can well understand Nervi's distress that his forms are now being debased by architects into mere Formalism or hidden by fenestration patterns. Writing of the UNESCO Headquarters, and the Pirelli building, etc., Mrs. Huxtable remarks: '... these buildings frequently fall short of Nervi's finest expression alone. . . . Unfortunately the architects who work with Nervi are seldom as directly concerned as he is with the primacy of the structural solution.' Of course not, for his main creative achievement has been in the construction of hangars, arenas, and stadia, and these, as she rightly remarks, 'are engineering problems before they are anything else, since the requirements of open span shells and amphitheaters call for special—and dominating—structural design.' If architects insist on adapting forms evolved for large-span structures to buildings of domestic purpose and scale, it is obvious that only compromise or Formalism can ever result.

The confusion between engineering and architecture can lead to quite nonsensical judgments. On p. 12 of her text, Mrs. Huxtable rightly, if somewhat facetiously, disparages the nineteenth century because then 'architecture, once the master of all the building, mechanical and structural arts, was reduced to a correct veneer'. But it is surely equally absurd to reduce architecture to nothing but a structural skeleton; to dismiss the main façade (behind the covered tribunal) of Nervi's stadium in Florence and the interior court of honor as 'architectural flourishes executed in the typical arid neoclassicism of the official fascist style of the '30s', and state that 'these less-than-desirable features, however, are overpowered and even cancelled out by the strength and originality of the main design'. Could Mrs. Huxtable, who is also an admirer of Louis Sullivan, consistently praise the beauty of the structural frame of the Wainwright Building whilst dismissing as 'architectural flourishes' the now unfashionable details and character of the façades, and still claim that Sullivan was nevertheless a great architect?

The total achievement of Pier Luigi Nervi as an engineer-contractor has undoubtedly been one of the greatest inspirations to architects in this century, and it is fitting that architects throughout the world should pay him homage. But it would be patronizing and inept to insist that any space-enclosing structure which is beautiful must *ipso facto* have been designed by a member of the architectural profession, and hence that Nervi's creations must be deemed architecture because of the admiration with which architectural critics regard his work.

PETER COLLINS
McGill University

M. D. Ozinga, *De Monumenten van Curaçao in Woord en Beeld* (The Hague: Curaçao Foundation for Monument Preservation, 1959), xix+278 pp., 295 pls., 86 figs., and 3 maps. \$14.50.

Curaçao, located in the Caribbean Sea about thirty-eight miles north of Venezuela, is the principal island of the Netherlands Antilles. The island is about forty miles long, six miles across, and occupies an area of approximately one hundred and seventy-five square miles.

Alonso de Ojeda, companion of Amerigo Vespucci, discovered Curaçao in 1499; and it was in Spanish possession from 1513 to 1634, when it came under Dutch control. Peter Stuyvesant administered Curaçao for a short while before assuming his duties in 1647 as Director General of New Netherland in North America. The English succeeded in taking possession during the Napoleonic Wars and occupied Curaçao from 1807 to 1816. With the exception of this decade the island has been under Dutch control to the present day.

The island has a dry, rocky terrain laid upon a volcanic substructure. The only natural building materials on it are corallite, lime, clay, and straw; and the land is worthless for agriculture. Thus, Curaçao has been largely dependent upon outside sources for food, brick, tile, wood, hardware, and at times for labor. In the early days the slave trade and the manufacture of Curaçao liqueur were the island's principal industries; since 1915 it has been an important international oil refining center.

With its European and North American connections as a Dutch colony, it is inevitable that the architecture of Curaçao would be well worth the careful documentation given it in this excellent book. The author is an authority on Dutch architecture; and as Professor of Architectural History at the Rijksuniversiteit te Utrecht and Chief Curator for the Monumentenzorg in The Hague, he is eminently qualified to make such a study. Professor Ozinga was commissioned to do this by the Stichting Monumentenzorg Curaçao and the Nederlandse Stichting voor Culturele Samenwerking met Suriname en de Nederlandse Antillen. He made two trips to the West Indies to study the works first hand, in addition to exploring the rich archive material in Holland. Although a few general works exist about the history of Curaçao, this is the first comprehensive documentation of its architecture.

The book is divided into two major sections, the first dealing with the historical background, the second with the monuments. In view of the island's earlier extensive military activities, a great amount of attention is given the fortifications of Curaçao which constitute its chief monumental works. Public and religious buildings, town and country houses are carefully treated in detail by individual streets and buildings. Concise English summaries are conveniently located after each major and minor division of the book.

As with our own seventeenth- and eighteenth-century architecture, the buildings of Curaçao are generally reflections of their European counterparts modified by local conditions. The first significant work to be produced after Dutch occupancy was what is now called Fort Amsterdam, in the present city of Willemstad. It was originally designed in the form of a bastioned regular pentagon along the lines of traditional Dutch forts. Although greatly altered, it is still the most prominent monument in the island.

Curaçao contains the oldest synagogue in the New World, the Dutch-Portuguese-Israelitic Synagogue, built in 1732-1733. The local congregation had strong ties with the Amsterdam community, and the synagogue was modeled after an Amsterdam example. The Curaçao synagogue also has historical connections with Peter Harrison's Touro Synagogue of 1759-1763, because the South American congregation helped their North American brethren to finance the Newport building.

Many of the town houses in the Dutch colony resembled the seventeenth-century merchant's canal houses in Amsterdam. The tall, narrow, closely packed buildings have steeply pitched roofs generally faced with an exuberant Baroque gable. Like their Amsterdam counterparts, shops and warehouses were created below while several living stories were piled above. Some of the colonial examples differed from their prototypes, however, by the addition of a verandah opening off the living quarters onto the street side. At first these galleries were simply appended to the building; eventually, however, they were fully integrated into the design.

This detailed and comprehensive work provides not only an intimate visual and literary survey of the military and civil architecture and planning of the Dutch colony of Curaçao but also a valuable general historical view of the island and its relation to the mother country.

The book, half bound in leather, is handsomely printed by the Staatsdrukkerij en Uitgeverijbedrijf in The Hague; and the excellent photographs and masterfully executed measured drawings were done by H. van der Wal.

THEODORE M. BROWN
University of Louisville

Clay Lancaster, *Architectural Follies in America, or Hammer, Saw-tooth and Nail* (Rutland: Charles E. Tuttle, Co., 1960), 243 pp., 79 illus. \$10.00.

While the eccentric person may not always be agreeable to live with, he is usually interesting to hear or read about. In architecture structures deviating from the expected manner and fashion of their age, expressing in building peculiarities equivalent to eccentricity in character, are often called follies. Just exactly what constitutes a folly as opposed to merely another individually remarkable building is a difficult question. In the prologue of his entertaining book Mr. Lancaster discusses the dual nature of the term. In one sense it has generally been applied to those buildings which either through their extravagance or the expression of some personal whim, seem to reflect the folly, in the moral sense, of the builder, usually also the owner. In the second sense, deriving from the French *folie*, the term has been used to describe light and fantastic structures such as garden pavilions or country seats often whimsical in character, intended to provide pleasure or delight. Sometimes both aspects of the term are apparent in a single folly; where fantasy is combined with absurdity the result is often wholly delightful.

In the first chapter the author briefly reviews the history of folly building from the Tower of Babel to the castles of Ludwig II of Bavaria. The first would appear to have been a folly only in the sense that it was an expression of folly in the character of the builders. In the latter there is the element of fancy and the exotic in design as well as in the intention of the builder. While the second case seems to this reviewer to be a better use of the term in architecture, both kinds of follies are considered throughout the book. Most of the emphasis in the introduction falls on the eighteenth and nineteenth centuries. In these centuries folly building reached heights that seem not to have been dreamed of before nor to have been surpassed since. Perhaps it is only because we are better informed about the state of mind of their builders that we prefer them to those of earlier times, but that hardly explains why they seem superior to the efforts of the present century. The house of M. de Monville in the form of a ruined column at the Désert de Retz near Paris is surely one of the finest follies of all.

After this introduction, Mr. Lancaster explores the development of folly building in the United States in a partly chronological, partly typological method. A consideration of 'The Follies of Old Massachusetts', Chapter 2, and of the 'Early Republic in Pennsylvania', Chapter 3, follows a brief note on some buildings from the Southern Colonies. These examples are characterized by amateur or owner-designed buildings and overly ambitious structures that often received the name of a folly because of the envy of their neighbors or the inability of the owners to complete them. In their architectural style they do not appear to depart greatly from the fashions of the day.

Under the title 'Archaisms', Chapter 4, the author suggests that much of the production of the Classic and Gothic Revivals might be classified as follies. Even if the whole of the Romantic Movement is held to be foolish, which hardly seems a tenable position, this would not of itself make the individual buildings follies in either of the two interpretations of the word unless there were other circumstances to make them so. Some Classic Revival houses were undoubtedly extravagant and sometimes were left unfinished and thus have earned the popular designation of a folly in their locality. Some of the Gothic villas and cottages are undoubtedly fanciful in detail and yet not eccentric enough to be considered a real folly. The examples selected to illustrate this aspect of folly building, Pitts' Folly near Uniontown, Alabama, and the Wedding Cake House at Kennebunkport, Maine, are not as convincingly follies as many of the later selections. It is possible that some follies might have been found hiding in the Egyptian Revival.

When the author turns to 'Oriental Exoticisms', Chapter 5, and an account of the riverine architecture of the nineteenth century, Chapter 6, we reach one of the more fascinating episodes in folly building in America. Iranistan, the house of P. T. Barnum, complete with a demonstration of elephant agriculture in an adjoining field, and the various exotic Oriental schemes of Samuel Sloan in Philadelphia, must surely be the most successful excursions into the realm of fancy in their century. The Mississippi steamboats, although more Gothic than Oriental, are their waterborne counterparts. The influence of the steamboat manner, and the parts and pieces which appear to have washed ashore, produced houses which are scarcely less strange than the vessels themselves, but which have the virtue of being more accessible today. Among these designs, the Paul Doullut houses in New Orleans (considered later in the book) are worthy of a rightful place with their elders.

The passion for oddly shaped houses is explored in Chapter 7, 'Geo-Forms'. Round and polygonal plans have enjoyed a long-lived if sporadic popularity. Not all of them are of sufficient exuberance to be compared with the Oriental confections, but such houses as Draughan's Folly, Texarkana, Texas, with a plan in the shape of an ace of clubs, and Hexagon House, Mineral Wells, Texas, can hold their own among the strangest residences ever built in this country. Is it surprising that both should have been built in Texas? On the other hand the octagonal houses that appealed so strongly to Orson Fowler seem to represent too earnest an approach to architecture to be properly labelled follies. After the 'Geo-Forms', the title of Chapter 8, 'The Bubbles', leads one to expect that there will be a continuation of exotic buildings in free-form shape, but the reader finds that it is a financial rather than a physical bubble that is referred to here. While the circumstances of their construction reveal foolishness or chicanery on the part of their owners, neither of the two examples illustrated appears to have had any unusual features in its architecture. This is perhaps the place to stress the point that while the owner's foolishness may often lead to the designation of his work as folly, it very well may be quite an ordinary building in appearance. The uninformed, not knowing the history of the building, would probably not think of it as a folly in the architectural sense.

Chapter 9, called 'Monuments to the West's Wild Past', which concerns the buildings in ghost towns, hardly lives up to the romance of its title. Here, as in the preceding chapter, it is something other than strangeness of design that gives them their interest. In this case it is the emptiness and isolation that sets their tone. Once these ghost towns are re-peopled with tourists, the appearance of the buildings is not noticeably different from that of many others. Chapter 10, 'Ivory Towers of Babel', is devoted to a collection of the extravagant houses built by the very rich in the later nineteenth century. Neither their style nor the circumstances of their construction, except for the Mystery House at Winchester, California, however, are sufficiently exotic to place them convincingly in the higher rank of follies.

'Cereal and Pachyderm Architecture', the theme of Chapter 11, offers some of the most startling constructions of all. Here are follies without question. The Corn Palaces of Mitchell, South Dakota, and the Elephant Hotels in New Jersey and on Coney Island would be worthy of the designation folly in any time and place. If, as the author shows, the idea of giving a structure the shape of an elephant, is not originally American, surely the idea of lodging paying guests in it must be. One would like to know something of the people who elected to pass their holidays in an elephant. Mr. Lancaster deserves our thanks for bringing these exotic buildings to light. Perhaps future research may reveal more of this interesting mammalian phase of American architecture.

The last two chapters, 'Importations, Integrations, and Imitations', Chapter 12, and 'Shoddy Follies: Originals of the Twentieth Century', Chapter 13, as well as the 'Epilogue: Follies ad Infinitum', carry the reader well into the present century, although the author

disclaims the intention of making an exhaustive study of the follies of the twentieth century. Some of the examples illustrated are of buildings imported from abroad. Unless there are other circumstances involved, this in itself would not seem to be a sound reason for considering such a building a folly. One would question the inclusion of a Swiss Chalet erected in Cincinnati, Ohio, for example. The chalet mode, as the author notes, was rather widespread in the nineteenth and early twentieth centuries, used by Bernard Maybeck among others. It may be collector's architecture or a museum piece, but is it a folly? There are indeed some designs by Maybeck that without being Swiss might have been included in the list of follies. The piling up of oddly assorted fragments, whether of Oriental inspiration as in the Vedanta Society Building in San Francisco, or aeroplane and Japanese features in bungalow designs, or the selection of used bottles as a building material seem better criteria on which to base the appellation of folly. A summer residence in the form of the Leaning Tower of Pisa built in Niles, Illinois, is one of the most striking examples of the later follies. The author also includes Sam Hill's Folly, now the Maryhill Museum on the Columbia River, which architecturally is not very unusual, although it has a curious history. He does not mention the nearby replica of Stonehenge at full size. This was also built by Sam Hill and ought to qualify as a first-class folly under any definition. Since he does get into this period, the author might have mentioned the spectacular towers in Watts, California, built by a tile-worker named Simon Roda or Rodilla. Near the end of the book the author informs us that he has designed a number of follies none of which has as yet been executed. The reader is advised that he is prepared to supply designs for follies to those desiring them. It would be pleasant to think that some reader might commission one which might then be included in a later edition.

The book is illustrated with black and white drawings and a number of color plates. The author has drawn and painted the majority of the illustrations. Some, chiefly among the European examples, are illustrated with contemporary prints. On the whole these give a better idea of the individual characteristics of the follies. Regardless of what one thinks of the author's style in illustration, having the structures drawn by one person tends to minimize their eccentricities. Both from the point of view of the architectural historian and the general reader, photographs would have been a better choice for the illustrations. Where the architecture is of such a subjective nature surely the medium of reproduction might have been as objective as possible. A useful list of the buildings arranged alphabetically by location forms an appendix. There is also an index. The end papers are decorated with a handsome map of the United States with the buildings graphically indicated on it.

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Carl W. Condit, *American Building Art—the Nineteenth Century* (New York: Oxford University Press, 1960), xviii+371 pp., 139 illus. \$12.50.

In 1952 Mr. Condit published *The Rise of the Skyscraper*, in which he recounted the first vertical triumphs of the Chicago School. The development of the structural system which constituted its prime permissive factor naturally served as a dominant theme in this earlier volume.

In his new book, *American Building Art*, Mr. Condit essays 'A comprehensive history of structural forms and techniques in the United States . . . as they developed into the structural basis of mod-

ern building. . . ' The present volume deals with the nineteenth century, but the author indicates his intention to continue his study into the twentieth.

The text begins with an introduction which outlines the emergence in Europe of the new mathematical theory of structures. Two chapters on building frames follow; one on wood, the other on iron. Four chapters deal with bridges. One chapter is devoted to wide-span trainsheds. A chapter on concrete construction includes buildings, bridges, and dams. The final chapter attempts to establish a degree of compatibility between eclecticism and nineteenth-century constructional innovations.

The chapters on bridges provide descriptions and illustrations of a number of structural types: timber and iron trusses; suspension; and iron arch. The result is a convenient compilation of data drawn from diverse sources, both secondary and primary. The story that emerges is a dramatic account of the binding together of a continental nation by the heroic efforts of self-trained builders and, later, by an expanding company of well-schooled structural engineers. Nevertheless, though lives and works are briefly recounted, one occasionally wishes for a sounding beyond the standard sources of the engineering journals.

Theodore Burr is a case in point. In contrast to two earlier arch-braced truss bridges, he erected over the Mohawk at Schenectady in 1808 an extraordinary structure composed of four suspended spans, 157 to 190 feet in length, supported by three continuous timber 'chains' formed of eight layers of 4×14 inch white pine planks, spiked and bolted together. It is tempting to speculate that the origin of this structural curiosity may have been due to a mistranslation of the Italian term, *catena*, used by Vincenzo Scamozzi in his *Idea dell'architettura universale* (Venice, 1615) in describing certain timber bridges he had seen in Switzerland and Bohemia. Because the term would normally mean 'string', a cavalier reading of Scamozzi would seem to imply a timber suspension bridge. In reality, however, Scamozzi revealed in accompanying illustrations that he meant the upper 'chord' of a truss. This misconception continued as late as 1822 (S. Ware, *Tracts on Vaults and Bridges*, London). It seems plausible that Burr, who no doubt knew of James Finley's iron-link suspension bridges recently erected in western Pennsylvania, innocently accepted the error as a precedent for a similar construction in familiar timber techniques.

Another instance is the 'Colossus', the 340-foot timber span built across the Schuylkill at Philadelphia in 1812. The author follows the engineer-historians in attributing its design solely to Lewis Wernwag, whose only previous project had been a modest 100-foot span erected in 1810. Although unmentioned here, it has always been known that Robert Mills supplied the ornamental details, but it is usually overlooked that he had already devoted considerable study to bridge problems. It seems more credible, therefore, to believe that both joined forces in the design of this engineering masterpiece.

The story of iron bridges is given in considerable detail, beginning with Finley's link suspension structures, August Canfield's curious patent of 1833, and Richard Delafield's arch of 1836 at Brownsville, Pennsylvania. The variety of types described is almost endless and the trend from elegant litheness to massive strength, stimulated by ever-increasing weights of railroad rolling stock, is properly emphasized. The story is eminently readable and notes provide all necessary supplementary detail, even to the genealogy of each railroad.

Of the total of 275 pages of text, 147 are devoted to bridges and dams; and of 139 illustrations, 95 deal with such structures. In the light of the author's opening promise historians of American architecture, having felt overlong a real need for a thoroughgoing synthesis of nineteenth-century building construction, will be disappointed to discover that this section is confined to 118 pages, 43 per cent of the whole. While it is true that the construction of bridges led, during the middle of the century, to new methods of analysis and calcu-

lation which later contributed to the structural design of buildings, particularly skyscrapers and wide-span halls, the extended treatment of heavy engineering works has restricted consideration of architectural materials and systems so sharply that this phase of the avowed program unfortunately lacks both inclusiveness and depth.

Within this limited space, the author has chosen to focus attention almost entirely upon the development of building frames. Although a brief chapter is devoted to timber framing systems, it is the iron skeleton of the skyscraper that forms the real theme. The isolated introduction of iron columns, beams, and tie rods is set forth; the exploitation of iron fronts is told at length. The gradual evolution of a complete metal frame in New York is shown to culminate in George B. Post's Produce Exchange, 1881-1884. Finally, the Chicago phase is recounted.

It is curious to observe that, even in this brief treatment, a number of misconceptions and errors have insinuated themselves. A 'cruck' is misdefined as a 'method of bending trees into a vault' and is stated to have been used at Jamestown and Massachusetts Bay (p. 11). Clapboards are claimed as an American invention (p. 12), despite earlier use in Britain. *Poteaux-en-terre* were not 'driven several feet into the ground'—a method that would require a small pile driver—but were set in a trench and backfilled (p. 13). Contemporary drawings of the earliest New Orleans buildings reveal half-timbering exposed, rather than hidden beneath stucco plastering (p. 13). It would be interesting to know the evidence for colonial use of 'natural cement' (p. 14). While 'prefabrication' is always a troublesome term to define, the emphasis of its use around 1860 is surely gratuitous when the earliest example in America came in the sixteenth century and when the export of prefabricated house frames to the West Indies was a regular business in the seventeenth and eighteenth centuries (p. 24).

While Renaissance and Baroque architects often employed iron tie rods, the statement that they also used iron beams cannot be accepted without documentation (p. 25). The cast-iron columns of St. Anne's, Liverpool, 1770, are now known to have been preceded by several others, one set dating as early as the fourteenth century (p. 25). Unfortunately, the author missed A. W. Skempton's correction of this reviewer's report of William Strutt's Calico Mill, Derby, 1792-1793 (p. 26). This structure is now known to have had timber beams, but they were considered to be 'fireproof' because their soffits were protected by a thick coating of plaster.

John Haviland, one of the leading American architects of the nineteenth century, is demoted to 'a carpenter-builder', apparently on the strength of his 1833 revision of Owen Biddle's *Young Carpenter's Assistant* (p. 27). Badger's foundry and Bogardus' factory are transferred from the lower East Side of New York, to the West (p. 30). The Otis elevator in the Haughwout store was the country's first 'commercial' elevator, but followed several earlier installations of other types (p. 31). George Johnson's U. S. Warehousing Company's grain elevator in Brooklyn is correctly cited as the first of iron construction, but should be dated five years earlier than 'c. 1865', and has recently been recognized as the earliest example—next to Bogardus' shot towers—combining an iron skeleton with masonry curtain walls (p. 32). The author accepts Bogardus' claim that his factory was built entirely of iron—although surely not his model of it, as is stated—without suggesting how the news account of its timbers is to be reconciled (p. 33). Since the forming of iron by rolling goes back to the late eighteenth century, the importance of the wrought-iron beams of the Harper Building was that they were seven inches deep, the first in the United States of sufficient size to be suitable for building purposes (p. 36).

In a brief paragraph on hollow-tile fireproofing, the patent of Balthasar Kreisler is cited, but not that secured by both George H. Johnson and Kreisler (p. 44). Although both were dated 21 March 1871, the Johnson-Kreisler patent bears the earlier number 112,926, as against 112,930. It called for a one-piece 'book' tile, while Krei-

schier divided his into three sections. Both types had already received French patents. Since Johnson had visited Paris a short time before to observe French practice, it seems clear that the basic initiative was his. Kreischer entered the picture only because he operated a Staten Island tile yard. Curiously enough, however, in his first installation in the Kendall Building, Chicago, 1872, Johnson used a seven-piece tile arch.

The author refers to this reviewer's suggestion that W. L. B. Jenny, in designing the Home Insurance office building in Chicago, could easily have been inspired by Bogardus' shot towers and that Johnson could have been an intermediary to remind him of their iron-framed, curtain-wall construction (p. 52). Recently, A. W. Skempton has discovered that Peter B. Wight wrote in the 1890s that he recalled the use of the system not only in the shot towers, but also in Johnson's Brooklyn grain elevator. Since Wight furnished the fireproofing of the Home Insurance building, he too may have acted as the catalyst. In any case, this additional positive evidence greatly strengthens the possibility that the eastern precursors did indeed play a role in Jenny's technical background.

In connection with the dome of the United States Capitol, August Schoenborn was Walter's chief draftsman, not his consulting engineer (p. 66). He had no engineering training. Figure 19 bears a misleading caption, for it shows, not the 'framing of the dome', but a comparison of original studies by Walter and Schoenborn. It would have been more pertinent to show Schoenborn's fine working section of the dome as executed.

As to the origin of skylighted interior courts, it seems fortuitous to cite arcades when such a long line of glazed courts are available, e.g., Duban's museum for the Ecole des Beaux-Arts, 1833-1838 (p. 67). Finally, in the discussion of the claim of Leroy Buffington for his 1888 patent for skyscraper construction (p. 289), the author seems to have missed the definitive articles by Dimitri Tselos and Muriel B. Christison (*Art Bulletin* xxvi, March, 1944) which emphatically refute Buffington's assertion that he had first employed the system in 1882.

Although the volume promises a full account of nineteenth-century building construction in America, readers unfortunately will be unable to obtain a balanced view of a century which employed many other materials than timber and iron, and several other structural systems than skeleton framing. The statement that the work of Latrobe, Strickland, and Mills illustrates the opinion that 'the best architecture usually lay outside the main stream of technical innovation' is understandable only if 'innovation' is equated with metal skeletons (p. 16). One need only cite Latrobe's constant concern for the highest quality of construction and for protecting his monumental structures from the hazard of fire by the use of masonry vaulting. Strickland and Mills, his pupils, both continued this preoccupation. Mills—as the author recognizes in the Fireproof Building at Charleston (p. 26)—was extraordinarily thorough in his use of vaulting, and in developing it in his Treasury Building into the equivalent of twentieth-century shells.

Although the enlarged Georgia Mill at Smithfield, Rhode Island, is noted for its timber and masonry structure (p. 18), the role of its owner-builder, Zachariah Allen, in promoting New England mill (or 'slow-burning') construction is not recognized. The danger of jerry-built, iron-framed mills is illustrated by the collapse of the Pemberton Mill at Lawrence (p. 19), but the terrifying rapidity of their destruction by fire goes unnoticed.

One would expect from a volume on American construction some comment on whether unique features and qualities characterized American practice. Little is offered and this fact, in turn, raises the general question as to whether it is reasonable to expect that a meaningful analysis can be made on a restricted national basis in a field in which international communication of ideas was so rapidly exploited. It is certain that in most constructive techniques and practices, American architects followed the lead of Britain and France. It is

also certain that recognition of American contributions will require detailed knowledge of the whole field.

It remains to note that the book is attractive and well edited. From the scholar's point of view, it is disappointing that the sources of facts and illustrations are not given. When there are so few publications in the field, it is regrettable that this addition makes it difficult to build upon. Further, because inevitably such a study builds upon the work of countless predecessors, it seems only common courtesy to acknowledge the debt. Unhappily, the bibliography of the present work omits key articles which have supplied data for several extended passages of text.

TURPIN C. BANNISTER
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Vincent Scully, Jr., *Frank Lloyd Wright* (New York: George Braziller, 1960), 44 pp., 127 illus. \$3.95. Masters of World Architecture.

This is a slim volume composed of text, illustrations, and a selected chronological list of buildings and projects from 1889 to 1959. We presume that its purpose is to provide the partly or wholly uninformed reader with a panoramic acquaintance with Wright and his significance. It may accomplish this purpose, but for the reader who knows something about Wright to begin with it adds little to the already considerable literature on the subject except for some curious speculations as to the sources of his style.

In size and scope the book falls between a work which makes a studied contribution to that literature and a condensed reference-article containing the essential facts. It is neither one nor the other. The text, less than thirty-two pages long, attempts to cover the entire career of America's longest-lived architectural genius. The result is a somewhat superficial romp through Wright garnished with frequent and often puzzling analogies with an assortment of names and concepts from the whole sweep of history such as (to mention only a few) Nietzsche, Fenimore Cooper, Hadrian's Villa at Tivoli, Albert Camus, Bronze-Age Greece, Herman Melville, prehistoric Malta, and Thomas Jefferson. It is conceivable that in 300 pages some of these analogies might be meaningfully explored—in thirty, no. The uninformed reader will indulgently accept them as examples of inscrutable scholarship. For the informed reader, many of the ideas which Scully raises prick the interest only to be dropped as the text rushes on to the 'next phase' of the career.

In speaking of the Robie House, Scully, after a brief mention of the plan of the living-room floor to which the companion illustration (no. 40) is unfortunately that of the basement, launches into a statement of the putative relation of Wright at that moment and the aims of the Cubists, while, at the same time, he sets Wright up as the final embodiment of the westward push of our nation. It makes for hard going. He says: "The two persistent American images, the first of mobility—of flight, of 'getting away'—the second of rootedness and security, are now locked together in one climactic work that culminates a century or more of American art. At the same time the brick masses of the lower floor, solid and heavy, are being lifted too on their steel beams, like those which support the wide cantilevers above. Entrance is at the rear, so that the whole composition toward the street can remain one of pure and unbroken horizontals rising in

tiers. The meaning embodied by them would again seem to be double; it is first of the earth, with its clefts, hollows, and climactic masses, felt as full of life, always moving and lifting itself like some great beast as Cézanne saw it. The second meaning grows out of the first. As the earth and objects upon the earth are pulled into the rhythm of flux and change, it and they fragment into their components, which then oscillate around each other in an "eternal becoming". This is the world as the Cubists saw it. The Robie House thus combines Cézanne's reverence for the majesty of solid things and his recognition of the forces that pull at them with Picasso's and Braque's fragmentation of solids into planes which move continuously through space. If these thoughts are helpful, they are worth further pursuit, but the discussion stops here, causing the reader to wonder how much he has learned about the Robie House as a place in which some courageous clients of Wright's once lived.

Again, in considering Taliesin West, the author, delicately veiling the question of what the great house is like and for, enjoys with us some moments of indecision as to whether Wright in the desert worked with D. H. Lawrence and the Indians in mind or Minoan Crete. Crete finally wins out, since there is a mountain behind the building, and the paragraph ends with these sentences: "The special resemblance of Phaistos to Wright's use of the mountain mass seems especially cogent, since there Ida rises 'behind' the courtyard which otherwise opens southward to a valley view. It is clear that Wright always knew and admired Cretan architecture, since the first publication of it by Evans, which appeared from the end of the nineteenth century onward throughout Wright's earlier years. Its full subservience to the shapes of the earth, and the flowing, curvilinear continuities of its art, celebrating as they did the continuous rhythms of the earth and its goddess, must always have been sympathetic to him, although he had previously left their exploitation to the Art Nouveau architects of his youth." Here Scully does several things all at once: he informs us that Wright was an avid reader of Sir Arthur Evans in installments; he raises and disposes of the spectre of Art Nouveau in Wright's work; and he gives us something else (and even more imaginative) with which to spark our inquiries as to just where the Master of Taliesin got all his ideas.

Fresh facts and interpretations concerning Wright are always welcome, but it is our opinion that a thirty-page presentation of a sixty-year career does not offer the opportunity for the development of speculations as sweeping as these. This opinion is reinforced by recall of the extreme condensation to which, for the benefit of speculation, parts of the career are subjected. After a relatively lengthy discussion of the Willits House (with references to Palladio, George Caleb Bingham, Huck Finn, Whitman, and de Tocqueville), the Larkin Building, and Unity Church, Scully says: "It is impossible to discuss the many other successes of Wright's Oak Park years. His design became richer and clearer. The delicate proportions of the Hardy House, with its three levels poised on the side of a hill above Lake Mendota, and rendered by Wright as an incident in a Japanese screen; the elaborate but serene interweaving of lower and higher spaces and masses in the Coonley House; the interlocked two stories of space in the Roberts House; the clean advance and recession of light-colored planes in the Gale House are all examples of the harvest of this first maturity." In one round of verbal scattershot the reader has not only been told all he is going to get about three of these famous designs but he has been misinformed in the bargain. The Hardy House is not poised over Lake Mendota, which is at Madison, but over Lake Michigan at Racine. The house known as 'Falling Water' is not 'in Connellsville, Pennsylvania', but a good many miles deep into the country from that coal-grimed town; its nearest post office is a place with the memorable name of Ohio Pyle.

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Paul Zucker, *Town and Square* (New York: Columbia University Press, 1959), 287 pp., 96 pl., 58 figs. \$15.00.

This handsome and well-written book is a welcome addition to the history of city planning. It will, I venture to guess, be as widely read abroad as in the United States, dealing as it does almost entirely with foreign examples, except for a short chapter on early American public squares contributed by Carl Feiss as a postscript. No book like it exists, although much of the material can be found by the diligent reader in Brinckmann, Sitte, and especially in Lavedan. With the growing interest in the creation of squares, we have needed such a compilation for a long time, and have had to rely on these writers, on Robert Auzelle's *Documents d'Urbanisme*, and on occasional illuminations by Lehmann, Kimball, and Clark, among others, none of them being as comprehensive as the subject demands.

I must confess to a small difference of opinion with my friend Professor Zucker before pointing out his book's excellences. He advances a concept which tries, in his own words, 'to develop the history and esthetics of the artistically shaped void, which finds its most outspoken and characteristic form in the square, in the plaza, the focal point in the organization of the town. . . . Artistically relevant squares represent organized space, and a history of the square actually means a history of space as the subject matter of artistic creation.' This seems to me too simplified a method of analyzing squares, and, when he employs it, leads the author into some extreme positions. Space was not the subject matter of artistic creation for many builders of squares, and to talk about 'the feeling for space in the south of Europe' in the Middle Ages is to be quite as vague as those political writers who fall back on 'national character' to explain events in history. In the Piazza del Duomo in Pisa, we are told, 'the physical space around the three buildings represents nothing more than a chaotic void.' I would have said 'four buildings', but never mind. 'The interesting successive views of these buildings from different angles in no way substitute for a comprehensive spatial experience.' How space-conscious can one get, and what counts most in the 'meadow of miracles'? Solids or voids? Here are the masterpieces of Pisan architecture beautifully arranged in a field as green as the heavenly pastures of Van Eyck, and that should be wonder enough for all of us. If we are worried about the kind of spatial experience we may receive, we can go to look at this religious center in the evening, when the buildings are illuminated in imitation of moonlight, and 'space' disappears altogether, swallowed up in a starry sky.

Luckily, Professor Zucker does not give us much in this vein, since he is too intelligent a scholar and too excellent an observer to remain hoist on his own petard. In fact, if he had not announced this concept and frightened us to death by referring to the square as a 'psychological parking space' in the beginning of his book, I doubt if we would have noticed this and like excursions scattered through the text. Mainly he describes squares as they were meant to be described, basing his analysis on the following factors: 'on the relation between the forms of the surrounding buildings; on their uniformity or their variety; on their absolute dimensions and their relative proportions in comparison with the width and length of the open area; on the angle of the entering streets; and, finally, on the location of monuments, fountains or other three-dimensional accents.' Using this method, rather than his intended 'space-void' approach, he gives us the best analysis of St. Peter's Square that I remember reading.

There are many such acute observations. The book is divided simply into the Antique period, the Mediaeval, the Renaissance, and the seventeenth to nineteenth centuries, the author pointing out quite rightly that many squares cannot be understood or enjoyed as an expression of a single historical epoch. He explains, nonetheless, how certain epochs brought forth, or at least preferred, certain types of squares. 'But it also becomes evident', he says, 'that paradoxically

such preferred types sometimes wandered, that they were taken over by epochs and countries where material conditions, sociological structure, and even functional needs, were entirely different, sometimes contradictory.' The sixteenth-century Vitruvian concepts of Spain as they were applied in Mexico are described in this light, and in general the book is most helpful in explaining origins and drawing parallels of a similar nature. Mr. Feiss's chapter too is quite useful in tracing American ideas about open spaces to their European prototypes.

Into each section of the book Professor Zucker has packed great numbers of examples and has taken pains to identify the designers whenever possible. He is especially good on the mediaeval square, about which a lot of nonsense has been written, and the chapter on its morphology is well done. But I also like him very much on France and he gives information on German town planning which will be new to most readers. He is perhaps too hard on the nineteenth century which, it is true, did create spaces containing buildings served up like a pudding on a platter, but the Piazza della Repubblica in Rome (based on antique origins) and many of the later English and American residential squares show that earlier traditions were continued almost into our own time (the date of the Fountain of the Naiads by Rutelli is 1901). And I suppose that anyone choosing squares as his subject must be expected to be a little hard on streets; the Rue de Rivoli may indeed 'prove better than anything else the victory of linear perspective' but I do not agree that it represents 'the complete neglect of spatial articulation'.

It is admirable that in a single and not unwieldy volume so little has been left out. I could not find any reference to Noto, and in fact there might have been a great deal more on Sicily altogether, although the Quattro Canti in Palermo is mentioned. The Near East is dealt with in a few paragraphs, the author pointing out that he is not familiar with squares outside the Western world, but I am glad that he included the King's Square in Isfahan, surely one of the most beautiful of all—500 meters long with its blue dome and its cream dome, its palace and bazaar. To visit the Maidan Shah, laid out by Abbas the Great, is one of the great experiences in town planning. The plan shown here is somewhat misleading, since it is a plan of the blue mosque with only a corner of the square itself visible. A reproduction of a Persian miniature showing the whole square and with the courtiers playing polo in this vast space would have told the story much better. I hasten to add that the plans and illustrations on the whole are very well chosen and beautifully reproduced.

To read this book is to be reminded once again that we have lost all sense of proportion and of visual justice. So few voices are heard in protest when a carefully planned composition is violated by an unsympathetic addition that it would have been invaluable to have included the methods used to protect squares in various parts of the world, as, for instance, in the Paris regulations. But this, perhaps, remains for the planner to undertake, rather than the historian. We must be grateful indeed to the author of *Town and Square* for his monumental analysis of the qualities which make us want to protect the square as we now protect the masterpieces of painting or sculpture.

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Books Received

- (Mention of a book here does not preclude its subsequent review.)
David R. Coffin, *The Villa d'Este at Tivoli* (Princeton: Princeton University Press, 1960), 186 pp., 137 pls. \$17.50. Princeton Monographs in Art and Archaeology xxxiv.
Klaus Franck, *The Works of Affonso Eduardo Reidy* (New York: Frederick A. Praeger, 1960), 143 pp., illus. \$11.50.

David Gebhard, *A Guide to the Existing Architecture of Purcell and Elmslie, 1910-1920* (Roswell, New Mexico: Roswell Museum, 1960, 17 pp., 2 illus. \$5.00. Publications in Art and Science no. 5.

An annotated directory with useful indices and a brief introduction of the extant works of these Prairie School architects.
H. Gerson and E. H. ter Kuile, *Art and Architecture in Belgium, 1600-1800* (Baltimore: Penguin Books, 1960), 236 pp., 160 pls., 7 figs. \$12.50. The Pelican History of Art.

Two of the eight chapters (about one seventh of the text) and seventeen of the plates are devoted to architecture.

John Harris, *English Decorative Ironwork from Contemporary Source-Books, 1610-1836* (Chicago: Quadrangle Books, 1960), 18 pp., 168 pls. \$10.00.

Barrington Kaye, *The Development of the Architectural Profession in Great Britain* (London: George Allen & Unwin Ltd., 1960), 223 pp. 25 s.

Emil Lacroix and Henrich Niester, *Kunstwanderungen in Baden* (Stuttgart: Chr. Belser, 1959), 453 pp., 142 illus. \$6.50. Distributed in America by Wittenborn and Co.

Eric Langenskiöld, *Pierre Bullet, The Royal Architect* (Stockholm: Almqvist and Wiksell, 1959), 170 pp., 141 figs. \$5.75. Kungl. Vitterhets Historie Och Antikvitets, Academiens Handlingar, Antikvariska Serien 8. Distributed in America by Wittenborn and Co.

Paul MacKendrick, *The Mute Stones Speak, The Story of Archaeology in Italy* (New York: St. Martin's Press, 1960), 369 pp., 172 figs. \$7.50.

Despite the title, this is an excellent scholarly survey of the present state of our knowledge of Italy from Prehistoric to Early Christian times. There is an excellent bibliography. Unfortunately the valuable illustrations are very murky.

Esther McCoy, *Five California Architects*, with a contribution on Greene and Greene by Randell L. Makinson (New York: Reinhold Publishing Co., 1960), 200 pp., illus. \$10.00.

Arno Schönberger, Hallfor Soehner, and Theodor Müller, *The Rococo Age, Art and Civilization of the Eighteenth Century* (New York: McGraw-Hill, 1960), 394 pp., 316 pls., 49 color pls., 77 figs. \$23.50.

Despite the incongruities of the title, this is an excellent pictorial survey of the eighteenth century, though it neglects architecture, except for the Cuvillies theater in Munich. The book, based on the Rococo exhibition held in Munich in 1958, is an enlargement and elaboration of the exhibition's catalogue.

John Swarbrick, *The Works in Architecture of Robert and James Adam* (Chicago: Quadrangle Books, 1960), 24 pp., 120 pls. \$10.00.

A reprint of the plates (reduced in size and rearranged according to buildings) but not the text of Adam's *Works*. The biographical note repeats much of the information and misinformation of Swarbrick's and Bolton's pioneering works but fails to take into account recent research by English and American scholars. The plates of the reprint are very poor and the added photographs vary in quality.

An Inventory of the Historical Monuments in the City of Cambridge (London: Royal Commission on Historic Monuments, 1959), 2 vols. plus maps. £5/5.

Periodicals Received

Bolletino del Centro Internazionale di Studi d'Architettura Andrea Palladio, Vicenza, vol. 1, 1959. \$2.75. American distributor is Wittenborn and Co.

Contains a variety of short articles on Palladio by such scholars as Fiocco, Argan, Franco, Gazzola, Ozinga, Pallucchini, Pane, Wittkower, and Zevi. There is also a discussion of the various activities of the center including a bibliography of recent articles.

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